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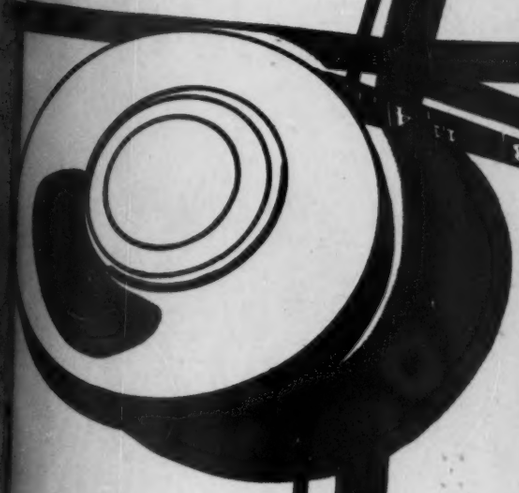
PRINTING PLANT PLANNING AND IMPROVEMENT

MARCH 1955

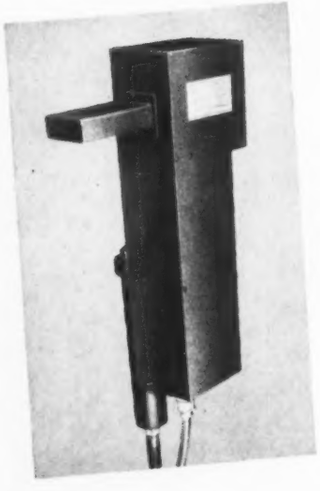


PRINTING EQUIPMENT *Engineer*

An Industry-Wide Technical Publication

The Star Selecto-Matic Quadder

for Teletypesetter Operation



The STAR SELECTRO-MATIC QUADDER will operate from TELETYPESETTER tape signals. This frees the perforator operator from filling out quadded lines, and eliminates double typing of centered lines. Perforator production increases 20 to 50% when the Selecto-Matic Quadder is on the line casting machine.

On the linotype, tape operation of the Selecto-Matic Quadder means fewer characters to be set, and less probability of delays caused by empty quad channels.

The manual model of the Selecto-Matic Quadder can be converted to tape operation with only minor changes and at nominal expense whenever Teletypesetter equipment is added later.

It will pay you to investigate all the advantages of the Selecto-Matic Quadder.

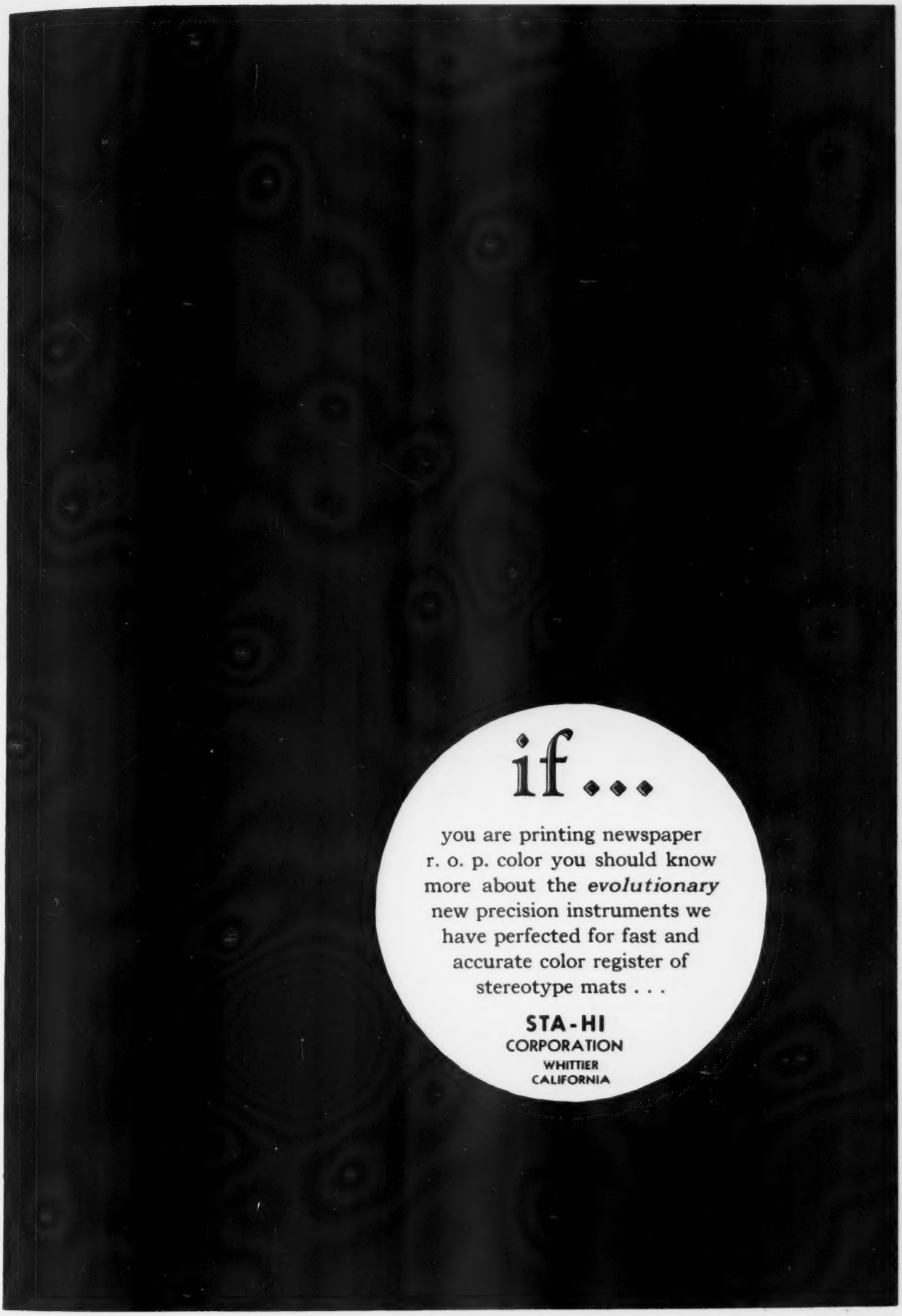
Write for new brochure today.

Precision TRADE ★ MARK Parts

BRANCH: 1327 BROADWAY, KANSAS CITY, MO.
AGENCIES: CHICAGO • MINNEAPOLIS
LOS ANGELES • DENVER • BOSTON
CANADA: SEARS LTD. and Agents Overseas

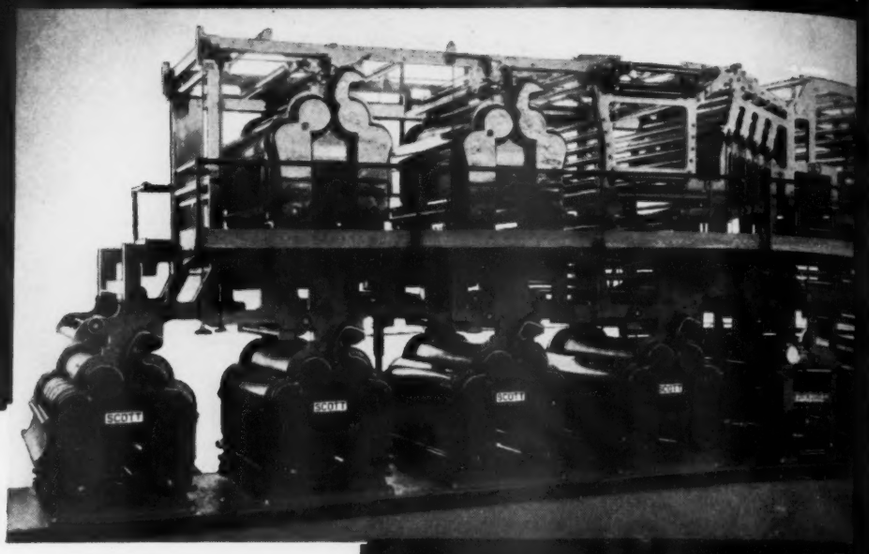
LINOTYPE PARTS *Company, inc.*

SOUTH HACKENSACK, N. J.

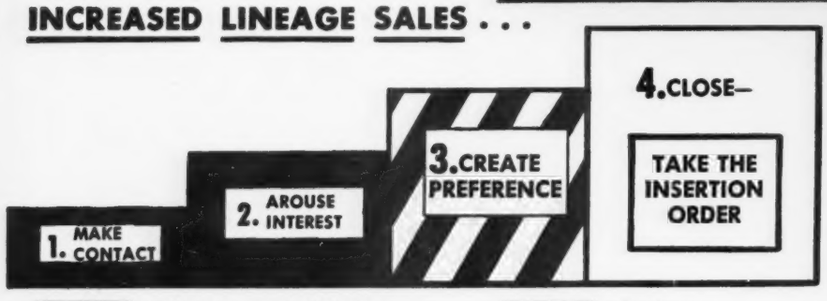

if . . .
you are printing newspaper
r. o. p. color you should know
more about the *evolutionary*
new precision instruments we
have perfected for fast and
accurate color register of
stereotype mats . . .
STA-HI
CORPORATION
WHITTIER
CALIFORNIA

COLOR *with* SCOTT PRESSES

creates "PREFERENCE"



CLIMBING THE LADDER TO INCREASED LINEAGE SALES . . .



ABOVE: Scott Octuple Press with 4 color printing couples superimposed over black units. Gives full color printing without losing any black page capacity.

"Color Creates Preference!" Ad men from every part of the country endorse color as the most effective lineage booster on the newspaper scene today . . . a sure sign of the modern newspaper organization.

The desirability of color comes hand-in-hand with the need for full-tone, perfect register, high-speed production. And installed color capacity has to be just right — Do you want to spot one color with varying black page capacity? — Do you need black plus independent four-color capacity? — These decisions tell you what your press needs will be. No compromise in design or arrangement should be made . . . none is necessary with Scott "Extra High-Speed" press.

Whether a single unit with a Scott Reversible Drive (a flick of a lever for color arrangement) is best for you, or multi-combination presses for variable four-color location, Scott engineers can advise and equip your pressroom. Reliable, modern standardized design — superior quality high-speed color reproduction from feed to folding; these are experienced proved facts, not claims.

WRITE FOR DETAILS
The complete illustrated Scott color press bulletin is yours on request.

Buy with CONFIDENCE - - - Buy SCOTT

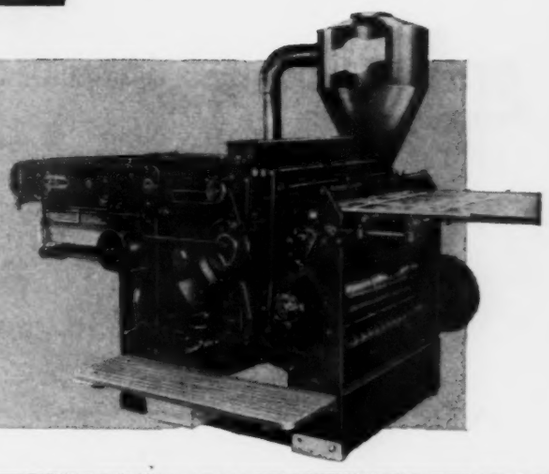
WALTER SCOTT & CO., INC.
PLAINFIELD, NEW JERSEY

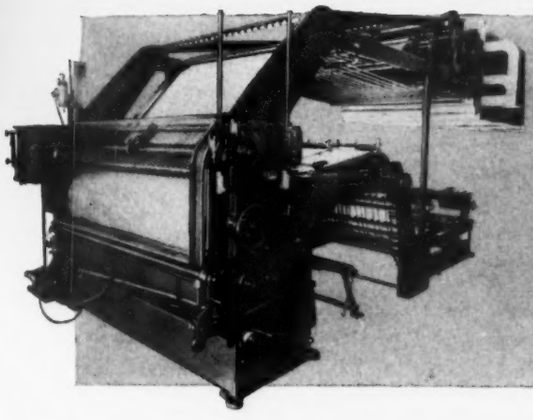
8-55-2

CHRISTENSEN... for Pressroom Profits

DEXTER

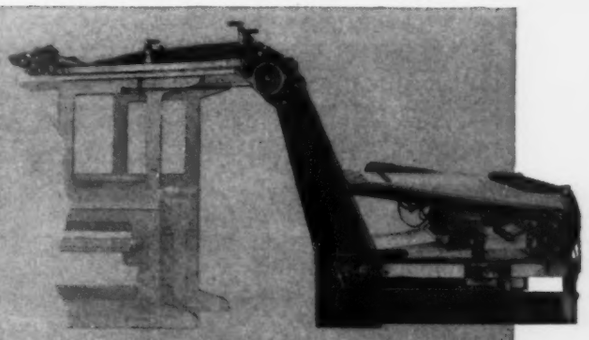
BRONZING Equipment will bring new jobs into your shop . . . and a Christensen High-Speed Bronzer attached to your press will mean increased profit with low operating costs. Matches the practical running speed of your press . . . exhauster-reclaimer keeps bronze out of the pressroom and in the machine.





VARNISHING of labels, magazine covers, circulars and gift wrappings enhances both product appearance and profits. The Christensen Varnishing Machine operates at almost twice the speed of any other present varnisher. Dual-level oven decreases floor space required. The Christensen will handle paper or board in widths up to 78 inches.

STREAM FEEDING with the Christensen Continuous Feeder means no stopping of the press . . . more printed sheets per hour. Improved register because sheets arrive at register position at one-sixth the speed of sheet-by-sheet feeders. Floor loading reduces operator fatigue, reduces loading time, eliminates stairs and platforms.



ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER FOLDER COMPANY

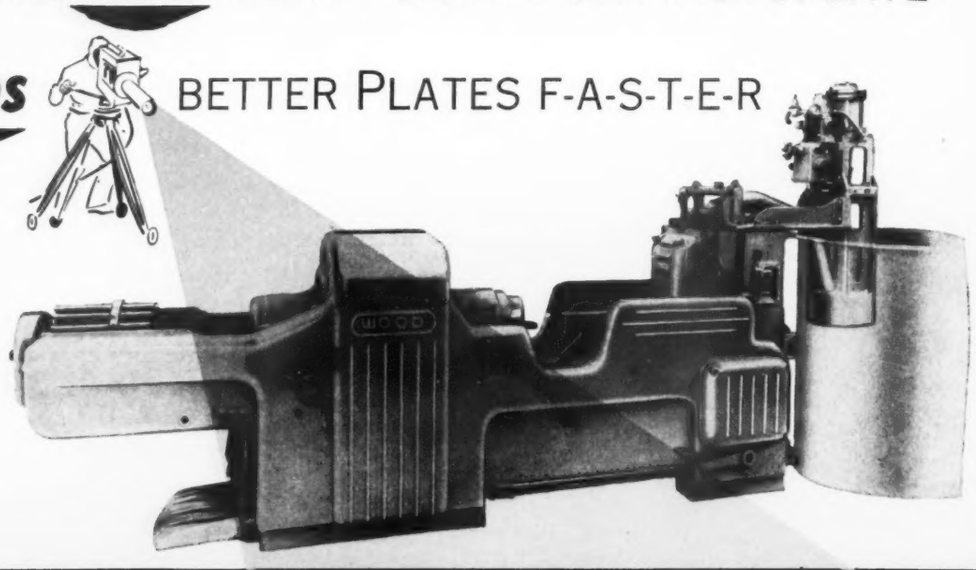
General Sales Office

330 West 42nd Street New York 36, N. Y.

1 of 6 reasons why

THE *NEW* HEAVY DUTY PONY AUTOPLATE

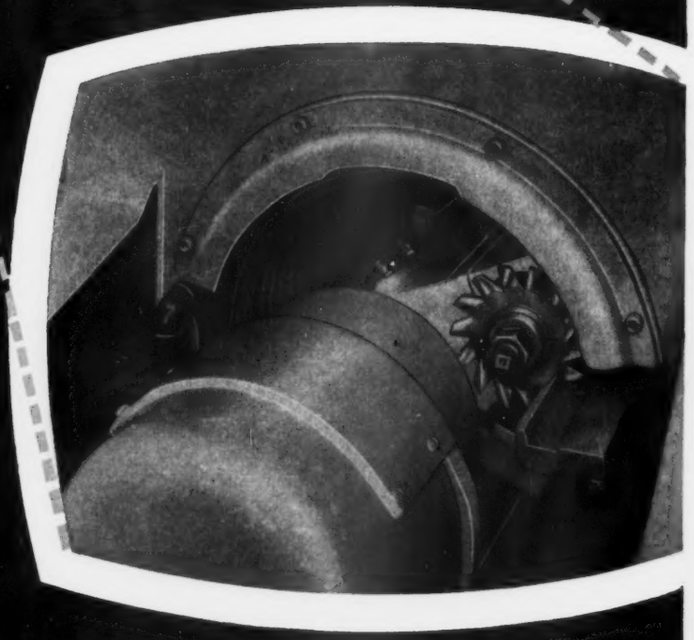
produces BETTER PLATES F-A-S-T-E-R



REASON #4

WATER-COOLED SHAVING ARCH

Massive, rigid construction; an integral casting with the frame, similar to the design used on our Heavy Duty Autoshaver. Positioning of plate in arch by cam faced plate stop insures plates of uniform length. Result: A properly shaved and trimmed plate, handled automatically.



IF IT'S Wood IT'S GOOD

WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY

EXECUTIVE AND SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, N. Y.

March 1955

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields.

PRINTING EQUIPMENT Engineer

Volume 85 Number 6

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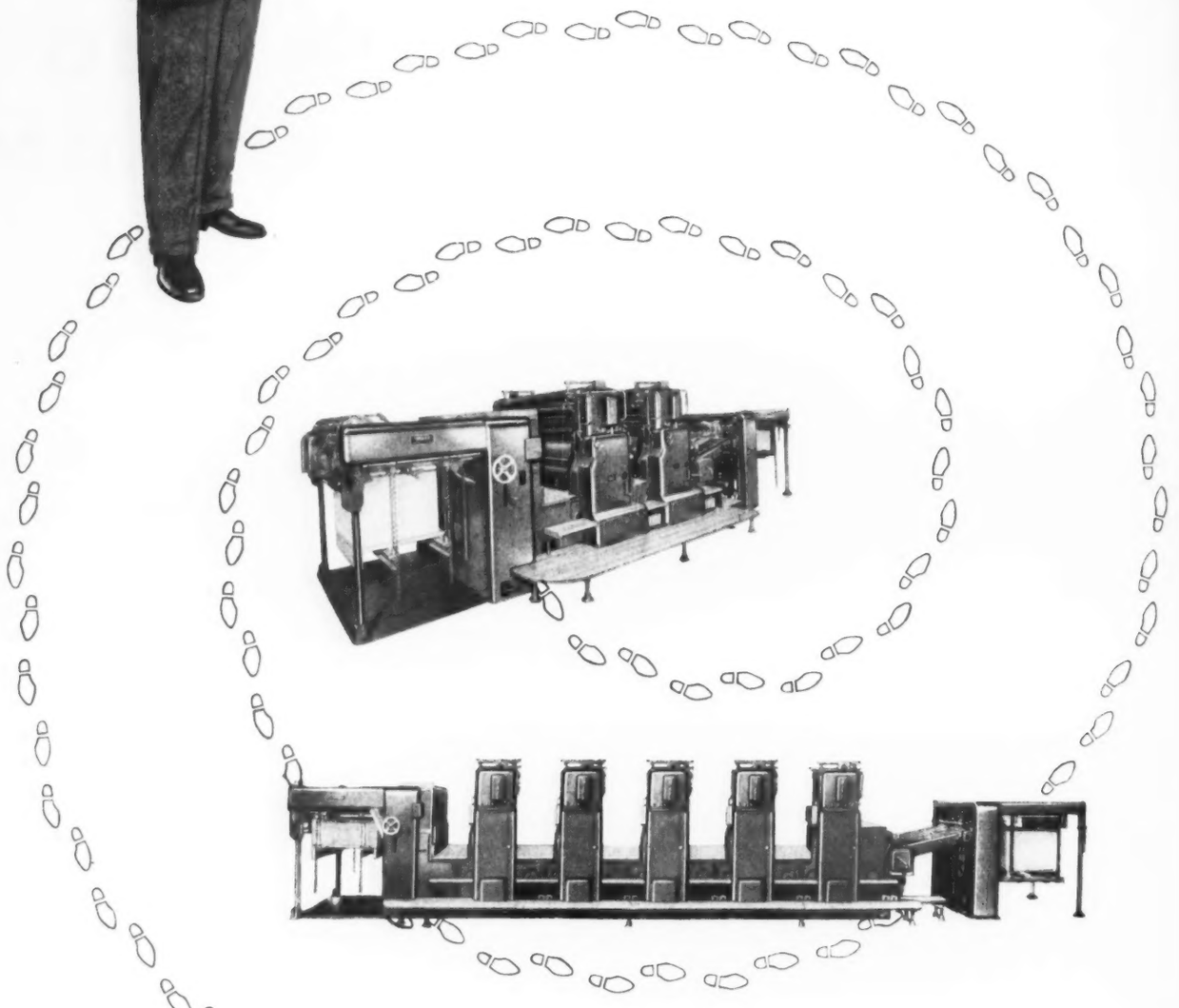


Investigate before you invest

Miehle Unit Construction on the
****61 and 76 Offsets *61 and 76 Rotaries***

Plan for tomorrow—today. Since Miehle 61-76 Offsets and Rotaries are built on the Unit Construction principle—you can install a one, two, three, four or five color press today, but if the pattern of your work is altered it is practical and economical to convert your press to a different combination tomorrow. It's a simple matter to add or remove printing units to meet changing plant conditions. We will be glad to tell you the complete story.

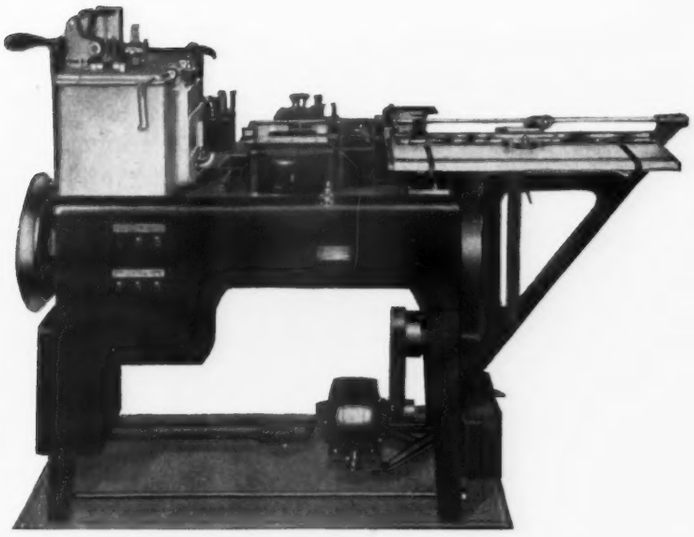
The Miehle . . .
leader among the world's manufacturers of fine printing equipment.

The Miehle PRINTING PRESS AND MANUFACTURING COMPANY
Chicago 8, Illinois

The Elrod will help to eliminate your strip material shortages and the inevitable waste of time and labor

Wide range of material from a single machine—1 point to 36 points in thickness

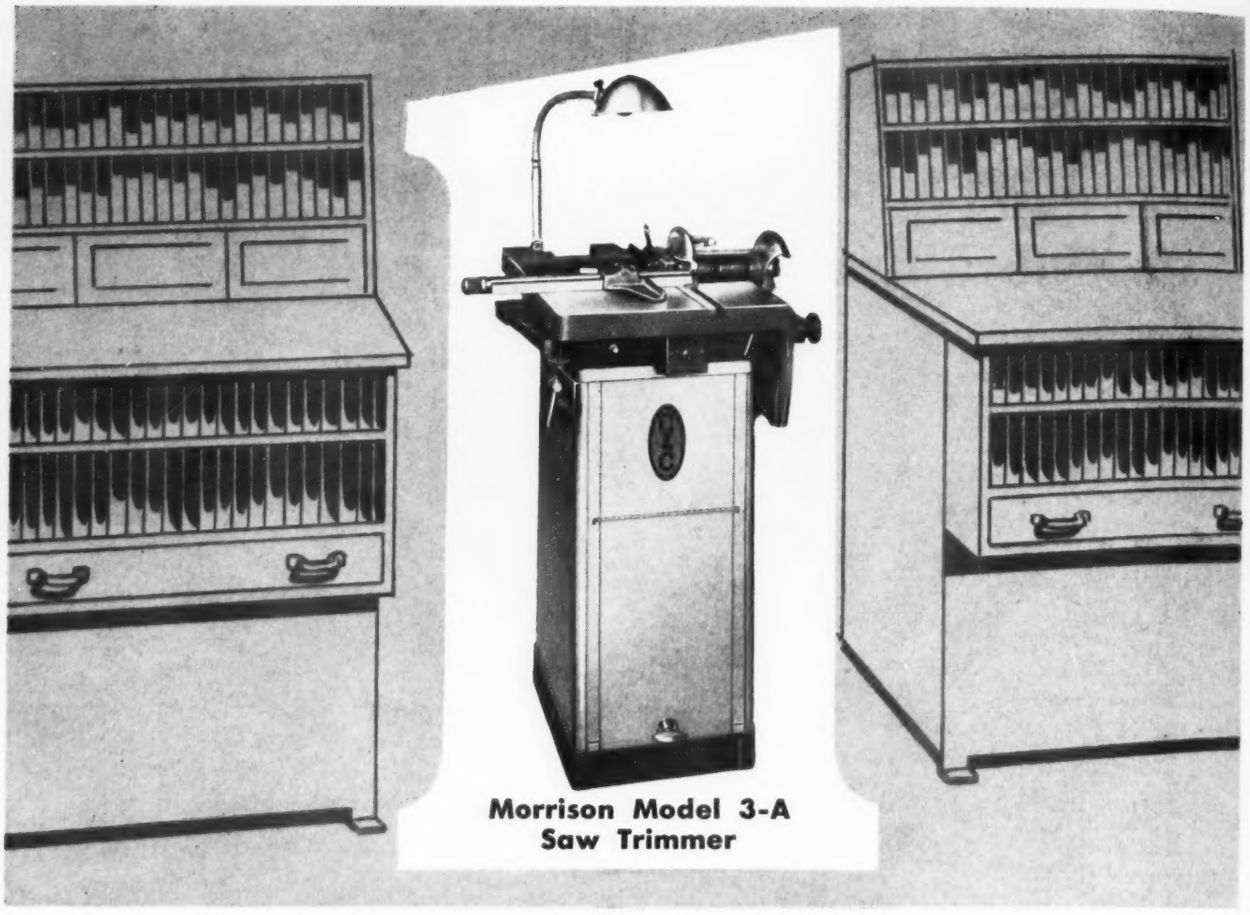
It's a boost to your compositor's efficiency when he turns to the strip material racks and finds an ample supply to see him through a heavy day's work. You can make sure of this with an Elrod installation—an equipment which many plants have learned to depend upon for an abundance of leads, slugs, rule and base material. Available in either gas or electric models.



The Elrod is sturdily but simply built for continuous production of high-quality strip material

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14

Set in members of the Ludlow Radiant family



Morrison Model 3-A
Saw Trimmer

ONE Morrison Saw Trimmer to EVERY TWO Make-Up Tables . . .

. . . The Nation-wide Standard of Composing Room Economy

MORRISON
MODEL 3-A SAW TRIMMER

Accepted standard in most composing rooms — versatile, fast and accurate. Features include: "Behind the Gauge" workholder, 73-pica gauge, 135-pica extension gauge, miter and line-up gauge, right and left hand miter vise, saw grinder, trimmer grinder, and others.

Leading newspapers in New York, Buffalo, Chicago, Milwaukee, — across the nation — are changing "walking time" to "working time" in their composing room with Morrison Saw Trimmers . . . Adding a new Morrison Saw Trimmer every time they add make-up tables. They save wasted steps, time, and money by bringing trimming within a step or two of composition. More than that, they've proved that a Morrison is faster, more accurate, easier to use, safer — and more economical to operate.

Write for catalog on ALL Morrison Saw Trimmers — as well as Morrison Slug Stripper, Plate Beveler, Router and Type High Planer, Strip Material Cabinets, Waste Receptacles, Universal Saw Blades, Router Bits, and Jigsaw Blades.

Symbol of Operating Economy

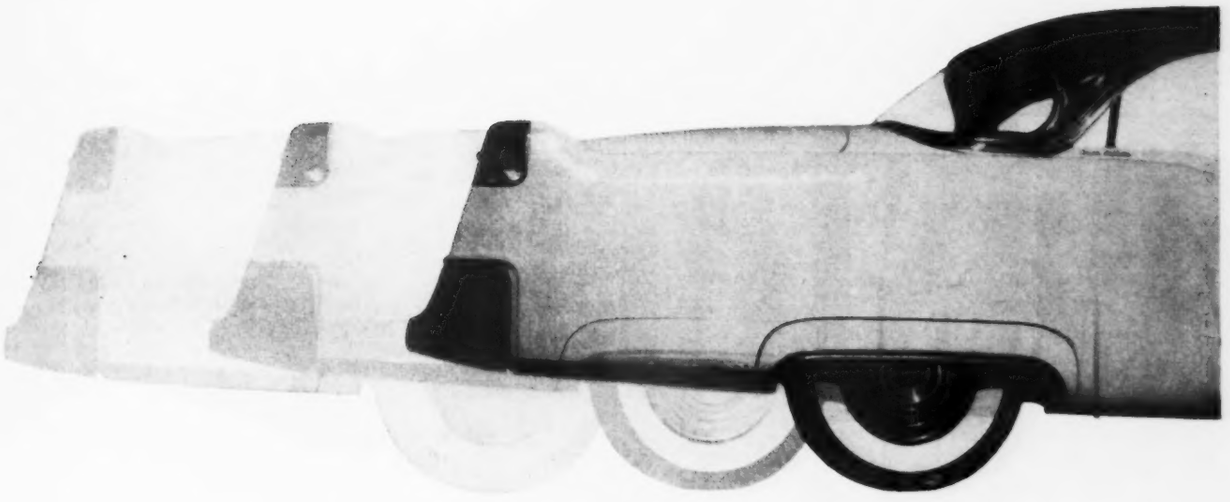
THE MORRISON COMPANY MILWAUKEE WIS.

THE *Morrison* COMPANY

PRECISION MACHINES FOR THE GRAPHIC ARTS INDUSTRY

125 W. Melvina Street, Milwaukee 12, Wisconsin

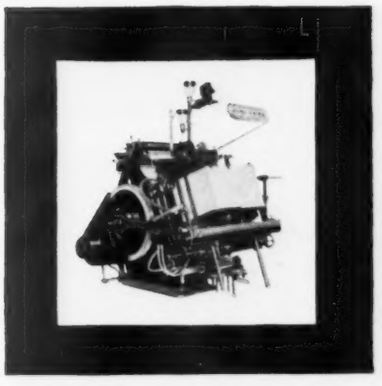
there goes a printer who **KNOWS HIS BUSINESS!**



ORIGINAL HEIDELBERGS

mean efficient production...

MORE PROFIT!



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Composing Room
Press Room

Whether Molding Blankets, Galleys, Press Blankets, or Cold Top Enamel . . . if it's EASTERN, you can depend on three things:

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EASTERN products are designed and selected to meet every one of these conditions. YOU can depend on them!

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96-03 NORTHERN BLVD., CORONA 68, NEW YORK

Equipment and *Supplies*

If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Collator Designed on Unit Basis

Graphic Arts Development Co. has designed a mechanical collator which is constructed on a unit basis, enabling users to install as many units as are needed. The basic unit consists of the main drive, a paper pickup station and the tape delivery. Feeder

units provide two paper pickup stations per unit. The automatic elevating and self-leveling paper stations accommodate sheets ranging from a minimum of 7 in. by 11 in. to a maximum of 18 in. by 24 in.

Furnished as standard equipment on each feeder station is a measuring device for detecting whether the feeder has erred by a margin of one sheet plus or minus. A red indicator signal lights up when this occurs to identify the station. Error detection at any station in use opens an electrical circuit which turns off the collator drive motor. Sponsor claims a minimum of coast in the collator when the machine is automatically stopped. Individually adjustable, the measuring devices permit a wide range of paper weights to be run on the machine at one time.

A variable speed drive provides an operating range varying from 2500 to 6000 sheets per hr. per station, depending on the paper stock. It will accommodate a variety of kinds and weights of paper. Each paper station is designed to hold a 14 in. lift of stock. For more details, please mention PEE No. 423 in your request.

Byron Weston Letterhead Paper

Byron Weston Co. has announced a line of rag content letterhead paper in the 25% rag content grade. The Weston's Hand Weave features an antique laid marked texture and is available in white and in four pastel colors: ivory, blue, green and gray. The paper is available in sizes 17 in. by 22 in. and 22 in. by 34 in. in substances

(Continued on Page 24)

World's smallest printer-slotter packs a big wallop

...uses TIMKEN® bearings to take the shock

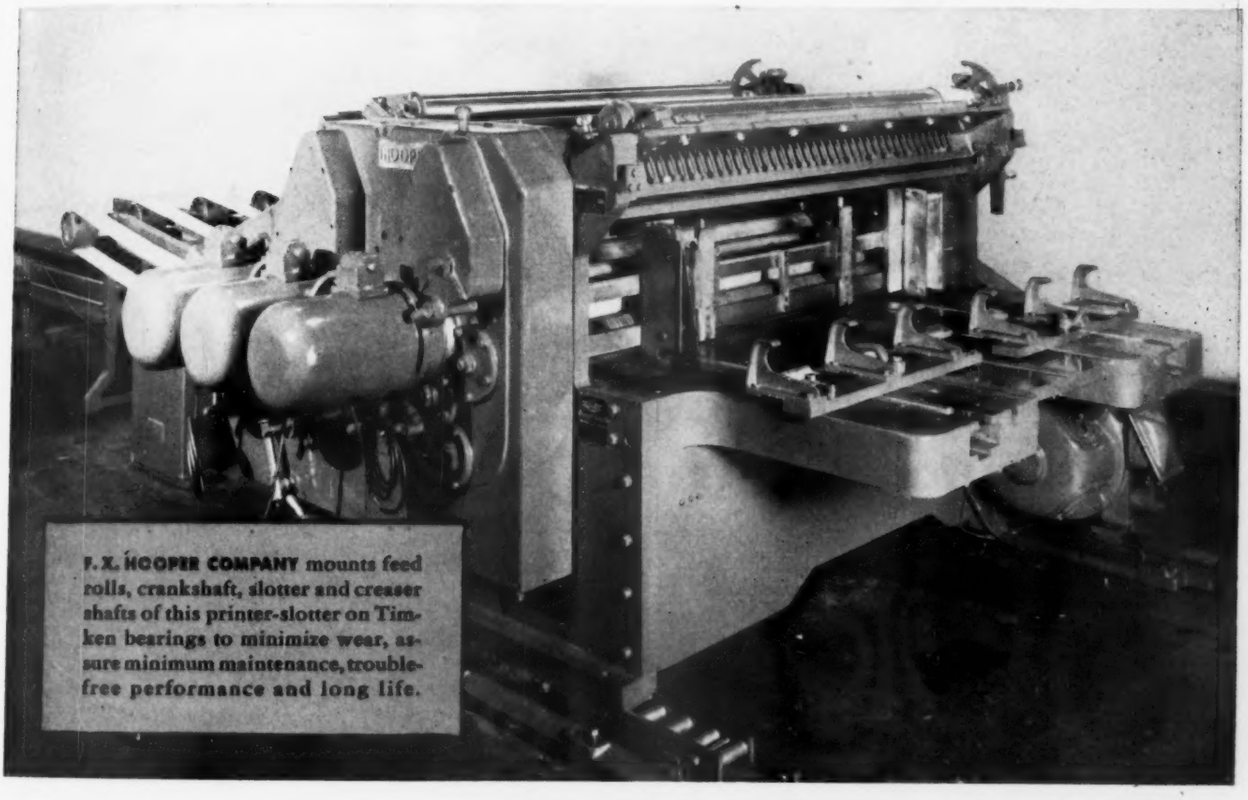
THIS tiny printer-slotter (weighs only 19,000 lbs.) can run up to 350 sheets a minute. To keep it running at top speeds and take the terrific shock loads of the impact cutters and creasers, F. X. Hooper Company mounts the feed rolls, crankshaft, creaser and slotter shafts on Timken® tapered roller bearings.

Timken bearings handle the shock loads with ease. Their rollers and races are case-hardened to give them hard, wear-resistant surfaces over tough, shock-resistant cores. And the tapered construction of Timken bearings enables them to handle any combination of radial and thrust loads.

Wear is held to a minimum because Timken bearings practically eliminate friction. That's because they're designed to roll true; and because we make them with microscopic accuracy to live up to their design. And you're doubly assured of Timken bearings' quality because we make our own steel. No other U. S. bearing manufacturer does.

To get these advantages in the printing equipment you build or buy, specify Timken bearings. Always look for the trade-mark "Timken" stamped on every bearing. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable address: "TIMROSCO".

This symbol on a product means its bearings are the best.

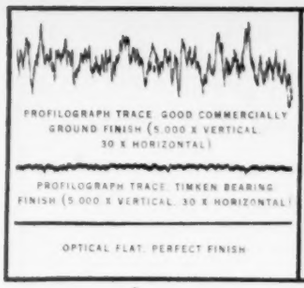


F. X. HOOPER COMPANY mounts feed rolls, crankshaft, slotter and creaser shafts of this printer-slotter on Timken bearings to minimize wear, assure minimum maintenance, trouble-free performance and long life.

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS


PROFILOGRAPH TRACE, GOOD COMMERCIALLY GROUND FINISH (5,000 X VERTICAL, 30 X HORIZONTAL)
PROFILOGRAPH TRACE, TIMKEN BEARING FINISH (5,000 X VERTICAL, 30 X HORIZONTAL)
OPTICAL FLAT, PERFECT FINISH

SMOOTH TO MILLIONTHS OF AN INCH

Surface finish of high quality Timken bearing rollers and races is so smooth that it takes a profilograph to measure its smoothness. This instrument measures surface variations to a millionth of an inch, as shown at the left.

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ↕ AND THRUST →◫← LOADS OR ANY COMBINATION →✳←

Mailing-room costs going up?

Bring them down with a SIGNODE Automatic Wire Tying Machine

first choice of more than 350 newspapers world-wide

If your daily press run is 50,000 or more, one or more Signode Automatic Wire Tying Machines can help you make *permanent* reductions in mailing-room operating costs.

You can effect reductions in labor costs, use your manpower most efficiently, meet all delivery deadlines, and assure your customers of tight, windproof bundles with added protection against pilferage.

Today, 350 newspapers all over the world are using Signode machines—many of them continuously for more than 30 years! In fact, the reputation of Signode's machines for dependability is so widely accepted, that over 30 newspapers with circulations in the area of 50,000 use only ONE machine.

Find out for yourself how Signode has eliminated the causes of tie-ups—how these heavier, sturdier wire tying machines can put your mailing-room cost savings on a permanent basis. Write:

SIGNODE

Steel Strapping Company

2667 N. Western Ave., Chicago 47, Ill.

SIGNODE

this seal means security in shipping

Offices Coast to Coast.
In Canada: Canadian Steel Strapping Co., Ltd.
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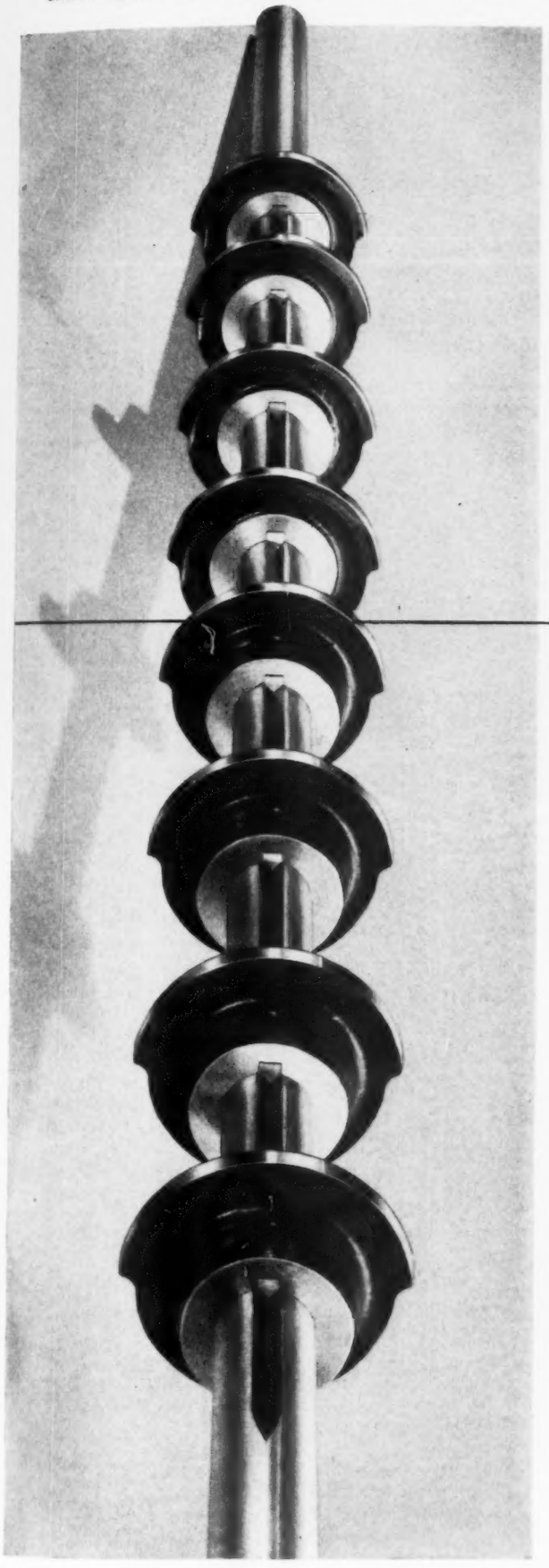
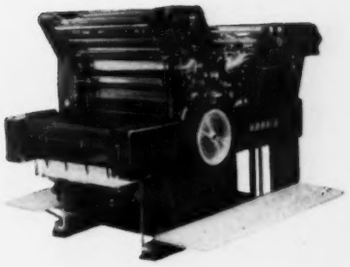
Ultra-precise Harris upper feed rolls—heart of the finest sheet-registering system ever put on an offset press.





NOW IN PRODUCTION

23x30" Harris Offset Press with FEED ROLLS

By popular demand there's a new press in the Harris manufacturing schedule—the Model 128B. "Nominal size" is 21 x 28"—but it handles a maximum sheet of 23 x 30" and prints a maximum image of 22⅝ x 29½".

And it has feed-roll register!

Now plants with completely different types of work can select a 23 x 30" Harris to meet their exact requirements. The famed Model 128A has three-point register. It's the press for shops specializing in quick back-up, work-and-turn, short-run jobs.

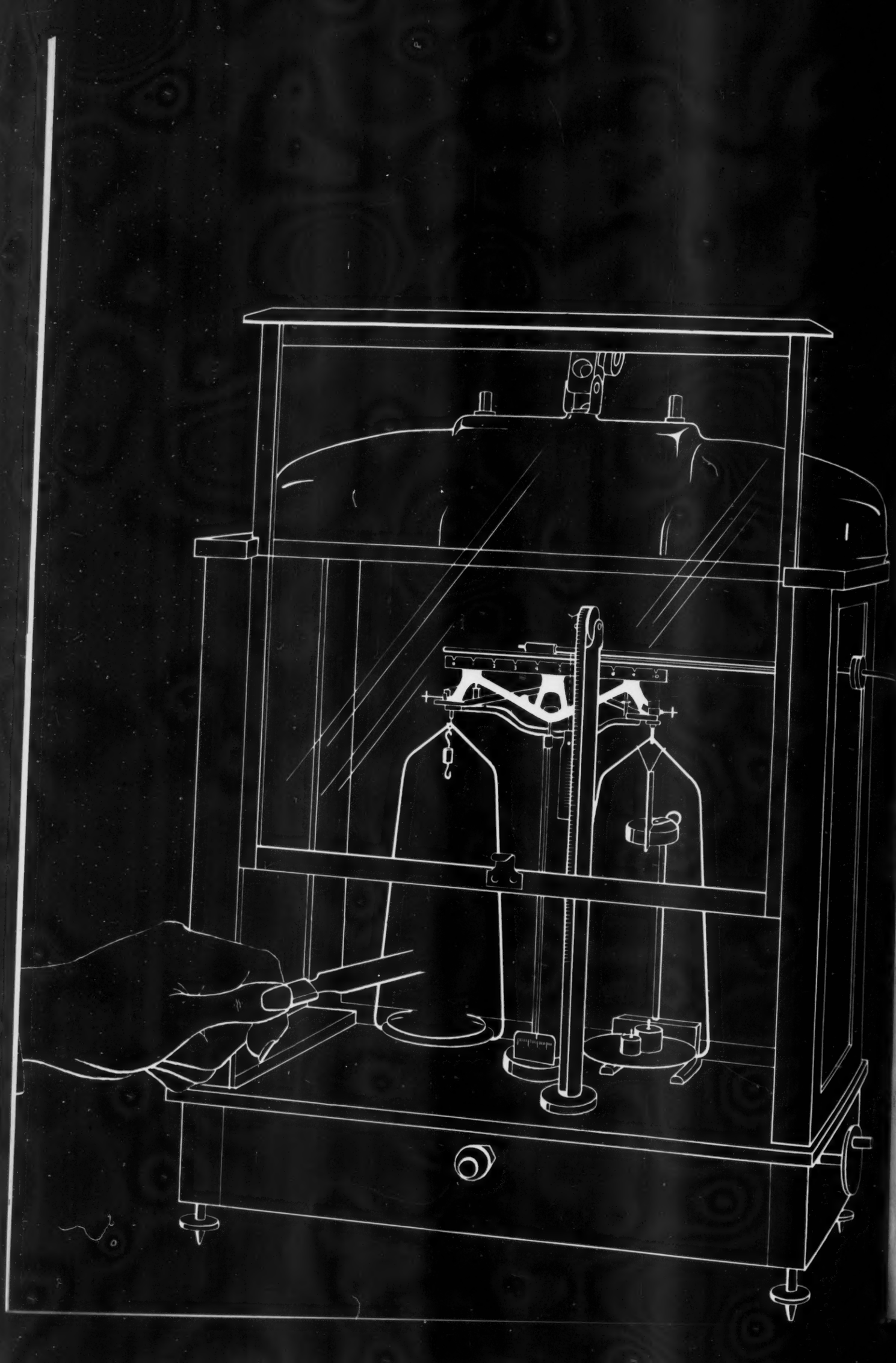
Some shops handle these quick back-up jobs without specializing in them. Their real specialty is long-run or hairline register work. They're the shops who'll want the 128B! It'll give them the speed and extra-precise register they need—thanks to feed rolls.

Ask your Harris-Seybold representative to explain the benefits of feed-roll register. Ask him if *your* type of work can be made extra profitable with a feed-roll 23 x 30" Harris—the new Model 128B. Or write to Harris-Seybold Company, 4510 East 71st Street, Cleveland 5, Ohio.

HARRIS-SEYBOLD COMPANY

fine graphic arts equipment...for everybody's profit

Harris-Division • Seybold Division • Chemical Division • Special Products Division • The Cottrell Company • Macey Company
Harris-Seybold (Canada) Limited



Color strength in IPI inks is evaluated by these ultra-precision balances for better color uniformity

The components in a printing ink formulation, unless properly dispersed, can throw a formula completely out of balance.

Unless the pigment is well dispersed in an ink, random samples from a single batch and successive batches of this ink will vary perceptibly in color strength. This results in low quality printing, imperfect color matches and less mileage.

IPI technicians check pigment dispersion by the use of balances or scales sensitive enough to weigh an eyelash. They can measure ink samples to within one-millionth of an ounce and compare the results against established color standards for each individual ink. Thus, color uniformity of each batch of ink is tested before a shipment leaves one of our factories.

This scientific yardstick is further proof of the emphasis IPI places on quality control. For you, it means high quality inks—and better quality printing.

IPI service at work for you

Printing plants of all sizes are invited to use IPI's complete ink service facilities in printing centers from coast to coast. Each local IPI service station and branch is staffed by local experienced ink men, well-seasoned in the special printing problems of each locality. They are always on call to help you solve any printing problems—large or small—that may arise. For prompt ink service with a personal touch, contact IPI.

IPI and IC are trade-marks of Interchemical Corporation

Interchemical Corporation

PRINTING INK DIVISION • 67 W. 44th ST., NEW YORK 36, N. Y.

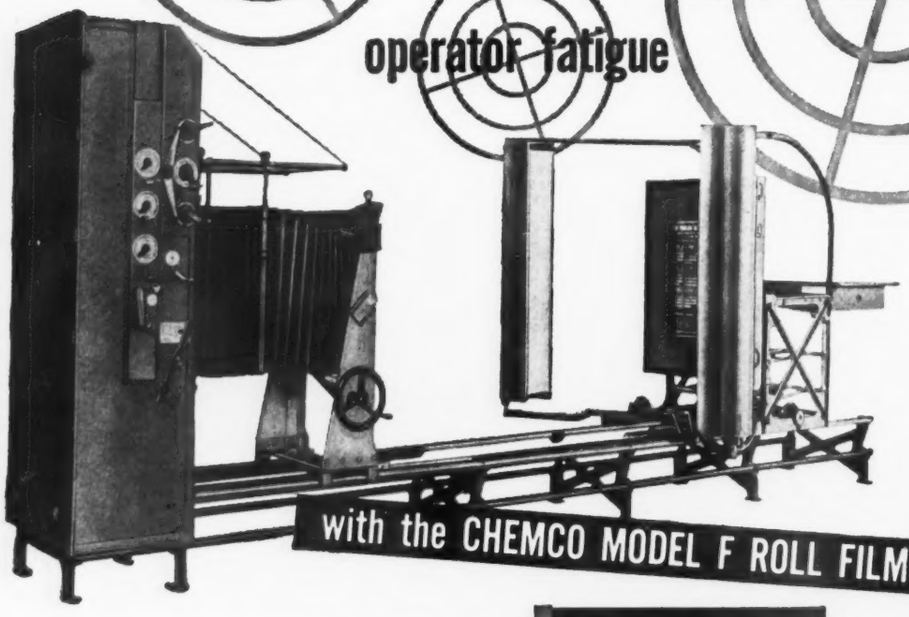
RELY ON IPI FOR LEADERSHIP IN INK RESEARCH

Shoot to Stop

high production costs

time consuming methods

operator fatigue

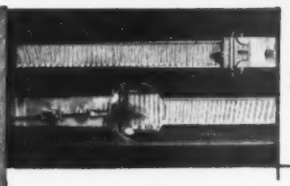


with the CHEMCO MODEL F ROLL FILM CAMERA

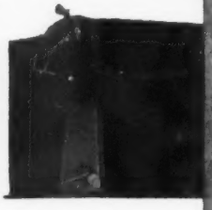
Here are some of the reasons why the Model F is used in hundreds of top quality engraving plants.

The CHEMCO Model F Camera permits the operator to shoot an entire series of exposures without a single trip to the dark room and gives precision negatives faster and easier. It houses three rolls of any width or combination of widths of film at the same time, with each roll having its own control and length counter dial.

All controls are operated from outside the darkroom.



Scale focusing system enables operator to achieve quick and precise focusing without using ground glass.



With the Chemco Side Arm Diaphragm Control the operator simply finds the scale number on the indicator arm in his line of vision and sets it to the desired F/stop on the precisely calculated curves related to the bellows extension. The lens is ready for the exposure.

Optional sheet vacuum back provides film selectively.

Adaptable for Mercury or arc lights to meet individual requirements.

Spring loaded copyboard swings effortlessly into loading or shooting position — holds itself in place.

IF IT'S chemco IT'S BEST FOR PLATEMAKING

chemco PHOTOPRODUCTS COMPANY, INC. GLEN COVE, N. Y.

ATLANTA BOSTON CHICAGO DALLAS DETROIT NEW ORLEANS NEW YORK

How to increase quality and profits in 1955

—There is an Ideal Roller Plan for you

Masterlith VULCANIZED OIL Roller

IDEAL PLAN No. 1

If your customers demand and pay for the highest quality multiple color work; if you must match ticklish progressives, reproduce tints and tones with unsullied linseed base inks—use IDEAL MASTERLITH vulcanized oil rollers throughout your press.

It takes craftsmen to handle these rollers whose fine textures are the acknowledged aristocrats of the lithographic field.

Exhaustive tests and years of usage by the best lithographers in the country have proved them to be unsurpassed for color transference and steadfastness of tone. They control water better than any other lithographic roller.

GRAYTONE LITHOGRAPHIC ROLLERS Masterlith VULCANIZED OIL Roller

IDEAL PLAN No. 2

If your customers want excellent heavy color work fast and if you must produce it quickly hour after hour, use Ideal GRAYTONE synthetic rollers in all positions except the last 2 form over the plate. Use Ideal MASTERLITH rollers in those two form positions to keep the plates clean and avoid halos and hickeys. With this combination, you can get speed and color at the cost of only a little extra care in handling the MASTERLITH rollers during the installation and during shut-downs for lunch.

GRAYTONE LITHOGRAPHIC ROLLERS

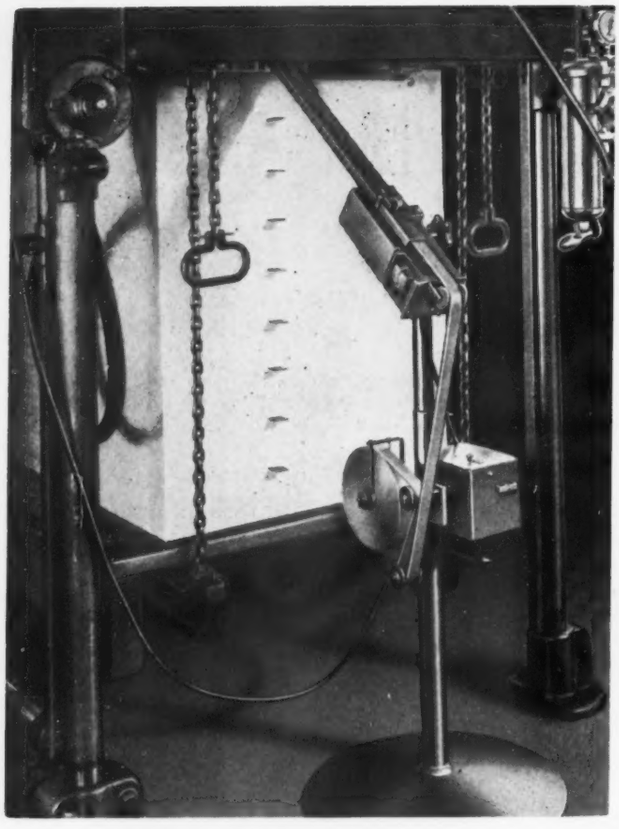
IDEAL PLAN No. 3

This is the plan that permits you to deliver excellent quality at the highest speeds your presses will travel. Use Ideal's sensational new GRAYTONE rollers throughout the press. They are especially suitable for heavy production runs and in those pressrooms where all of the men may not be skilled lithographers. These rollers are tough and are made to handle quick set inks so necessary in high speed runs. Use Ideal GRAYTONE rollers. The color aids you in seeing that they are kept clean so that inks come out sparkling and clear.

Only by using one of the above recommendations can you get the most out of your equipment, keep your costs low and deliver the kind of work your customers want. Rollers are the heart of your press. Without good rollers ink doesn't flow. Modernize your press room in order to increase both your quality and profit in 1955.

IDEAL ROLLER & MANUFACTURING CO.

Huntington Park, Calif. Chicago 8, Illinois Long Island City 1, N.Y.



Portable Automatic

SHEET COUNTER and MARKER

for Press Delivery Skid Loads

- **Eliminates counting time—builds profits.**
- **Fits all press sizes and sheet sizes.**
- **Count set by simple toggle arm selector.**
- **Count easily adjusted for zero start.**
- **Count readily corrected for spoiled or pulled sheets.**

This compact, portable unit automatically *counts* and *marks* sheets being stacked at the delivery end of presses, sheeters, die cutters, etc. Costly hand counting is eliminated—absolute accuracy is insured.

The solenoid-operated counter is activated by a count pick-up switch on the machine, with uniform marking tabs inserted into the stack at pre-determined intervals. The standard counter permits marking sheets at intervals of 50, 100, 200, 500 or 1,000. For odd counts, a Cyclo-Monitor control is furnished, permitting selection of *any count interval* from 1 to 2,000.

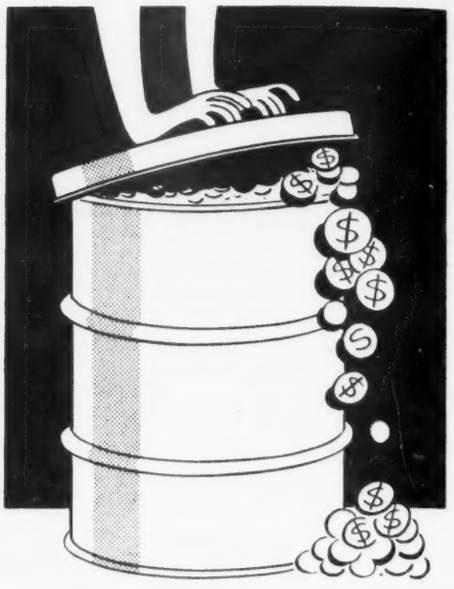
Counter & Control now offers a complete line of automatic marker inserters for every type of job—general purpose or special. Compare your present sheet counting costs and the savings obtainable with one of these new units. Ask for recommendations (no obligation).

WRITE NOW FOR BULLETIN 401

COUNTER & CONTROL CORP.

5220 W. Electric Ave.

MILWAUKEE 14, WISCONSIN



KEEP A LID

on Type Metal Costs

When remelted, all type metals lose valuable ingredients through oxidation. Unless systematically replaced, these losses increase your costs through production difficulties.

Imperial Plus Metal—if added pound for pound of dross when remelting—replaces these dross losses and restores your metal to its correct working analysis.

Thousands of newspapers and commercial printing plants are using this easy, economical way of keeping a lid on type metal costs. If you are not, we'll be glad to discuss this Imperial service with you.

IMPERIAL TYPE METAL COMPANY

PHILADELPHIA 34 • NEW YORK 7 • CHICAGO 50

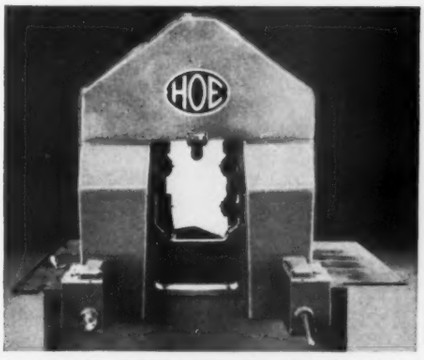
Imperial

SERVING THE GRAPHIC ARTS *Exclusively*

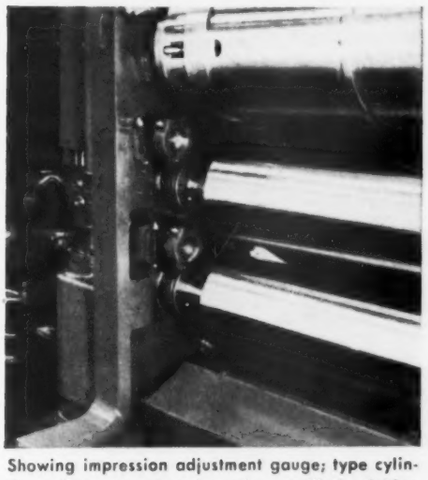
some special features of the HOE PRINTMASTER

the new single-width, unit-type press for smaller daily and weekly newspapers

Ink pump boxes for black and color are on operating side of press for the convenience of the pressman.



Vertical drive shaft is at the side, instead of in the center of unit, for clear access to arch when webbing the unit.



Showing impression adjustment gauge; type cylinder; adjustable sockets for rollers; oscillating inking cylinders; and ink rail in withdrawn position, for cleaning across face of rail outside of unit.

Press units are arranged to print eight full size newspaper pages or 16 tabloid size pages. The standard printing diameter is 14½" for semi-cylindrical plates, giving two 22¾" cut-offs a revolution. Adjustable lockups on the plate cylinders permit a choice of plate widths to print on webs from 30" to 35" wide, the latter sufficient for a 9-column page.

Facilities can readily be installed for printing spot or full color in any desired sections of the newspaper. The printing units are arranged so that a color cylinder may be added either to the first or the second impression couple, and each printing couple is constructed so that either member — or both — may be reversed for running ROP color.

For further details contact any HOE office.

R. HOE & CO., INC.

910 East 138th Street
New York 54, N. Y.
BRANCHES: BOSTON • CHICAGO
SAN FRANCISCO • BIRMINGHAM • PORTLAND, ORE.

A five-unit PRINTMASTER
floor-mounted for end roll feed.
The press can also be furnished with substructure mounting for underneath feed.

HERRICK Inks

William C. Herrick Ink Co., Inc.

Main plant and office — **East Rutherford, N. J.**

Branch plant — **Jacksonville, Fla.**

QUALITY NEWS, LETTERPRESS, AND OFFSET INKS

⊕ 8660

ANNOUNCING!

THE ULTIMATE IN OFFSET PRESSES

MODEL	MAXIMUM SHEET	
IV	30 x 42	one to five color
V	36 x 48	one to five color
VI	40 x 56	two to five color

miller

MILLER-M·A·N

(Pronounce The Letters—Not The Word)

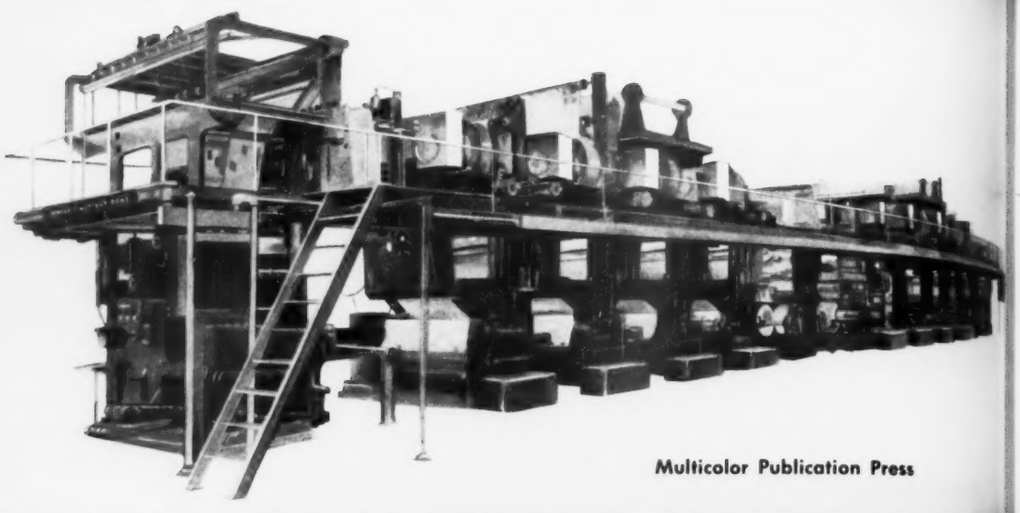
write Today →

MILLER PRINTING MACHINERY CO.
1103 Reedsdale St., Pittsburgh 33, Pa.

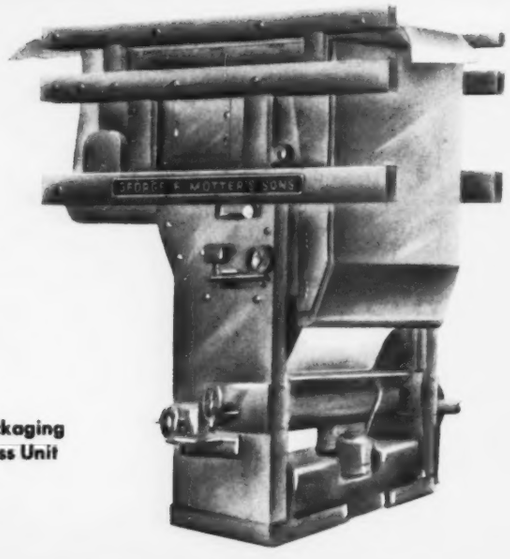
Miller Printing Machinery Co. of Canada Limited
730 Bay Street, Toronto 2, Ontario

Rotogravure Printing Machinery

Publication Presses



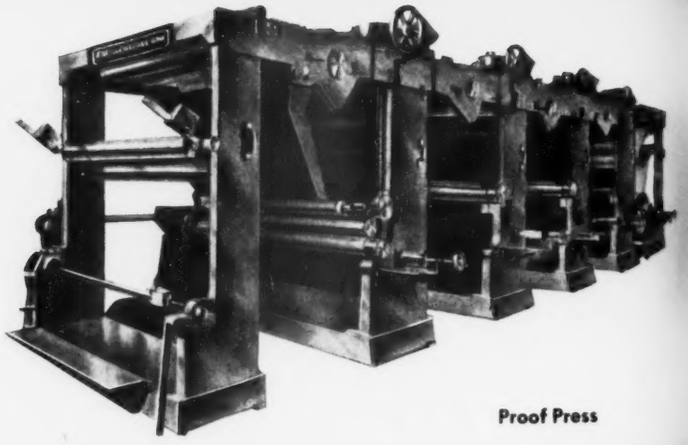
Multicolor Publication Press



Packaging Press Unit

Packaging Presses

Proof Presses



Proof Press

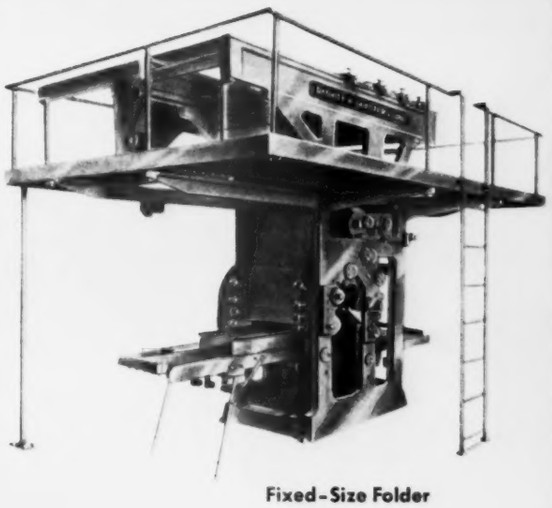
GEORGE F. MOTTER'S SONS

MAIN OFFICE AND PLANT
YORK, PENNSYLVANIA

designed and built by . . .

GEORGE F. MOTTER'S SONS

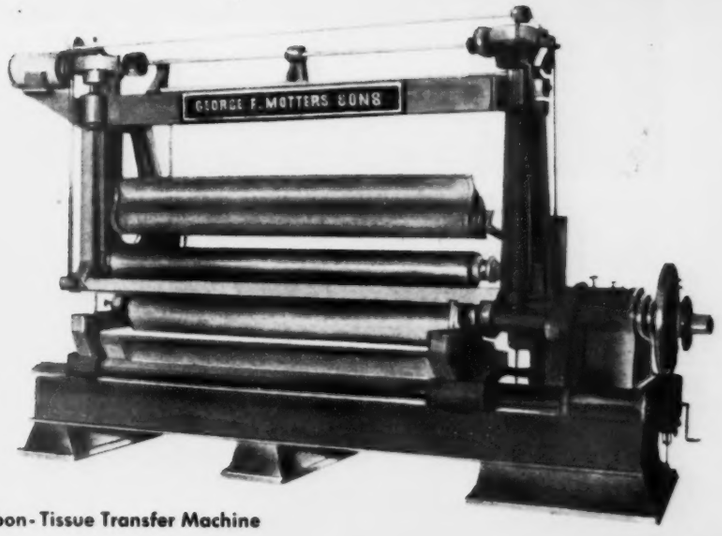
Variable-Size Folder



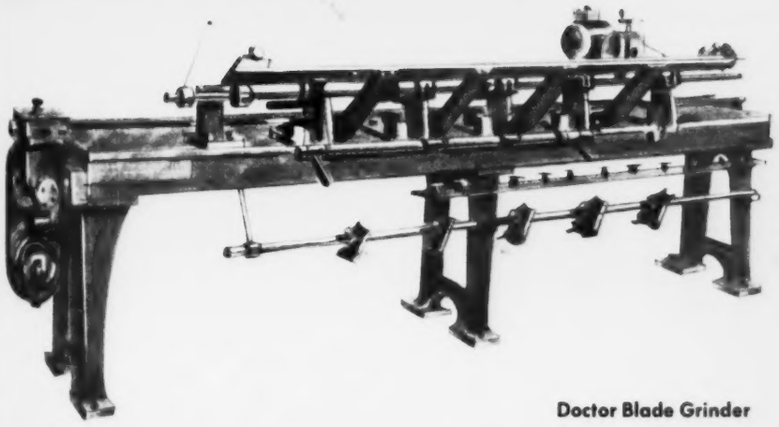
Fixed-Size Folder

Folders

Carbon-Tissue Transfer Machines



Carbon-Tissue Transfer Machine



Doctor Blade Grinder

Auxiliary Equipment

DESIGNERS AND BUILDERS OF PRINTING MACHINERY

PRECISION CRAFTSMANSHIP SINCE 1838

Equipment & Supplies

(Continued from Page 10)

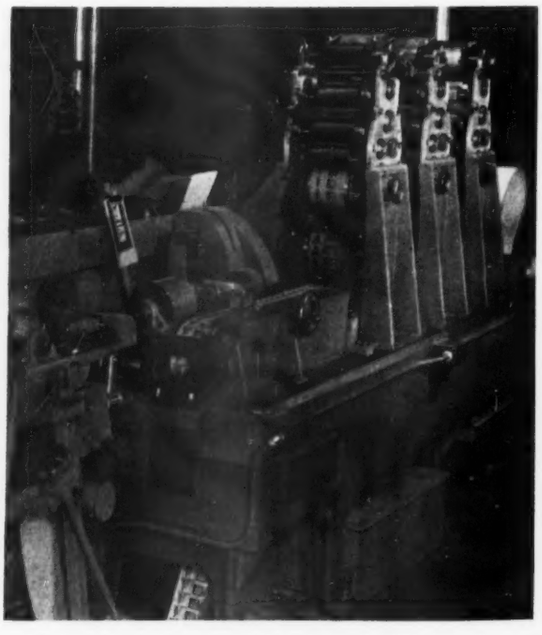
20 and 24. Envelopes to match and a correspondence cabinet of 100 sheets and 100 envelopes, confidential size, are also available. For further details, please mention PEE No. 405 in your request.

Motor Starter—A manual motor starter which provides across the line starting and overload protection for fractional horsepower motors driving small machine tools, fans, blowers and similar machines was recently announced by Cutler-Hammer, Inc. The starter is equipped with a toggle mechanism with twin break silver contacts and with direct wiring with line terminals at the top and load terminals at the bottom, identified by terminal markings molded into the base. An eutectic alloy thermal overload relay with inverse time limit is incorporated in the starter and is offered in both double and single poles; both open and enclosed types. The latter type is enclosed in a bonderized wrap around cover with fastening screw, the interior being accessible from the front and both sides. The open type is equipped with a starter mechanism confined in a molded phenolic shell. The open type can be fitted in a standard surface or flush type outlet box. For further information, please mention PEE No. 416 in your request.

Transparent Plastic Overlay

Bourges Color Corp. recently announced a transparent plastic overlay called Kleerkote. The plastic, approx. 0.005 in. thick,

(*Continued on Page 26*)



Short-Run Multi-Color Dry Offset Press—Ferguson Machine & Tool Co. will market dry offset (high etch) printing presses recently developed for its parent organization, Universal Match Corp. These multi-color, web fed presses are designed to print up to five colors at 9000 imp.p.hr. per color. Color registration is claimed to be excellent due to the accuracy of the feeding mechanism in which is incorporated a precision indexing Ferguson Drive and a special pin feeding method. A new ink distribution system, featuring improved fountain design with 10 rollers on each head, provides ink coverage. Small size plates, of 0.025 in. thick magnesium or zinc, etched to a depth of 0.011 in., are used. Little makeready is said to be required. The Ferguson Presses are available with one to five heads printing on a 6 in. by 5½ in. bleed surface and can be easily modified to increase the printing width. Other variations are also possible if required. The presses are suited for short run multi-color printing of labels, tags, office forms, tickets, coupons and items of similar dimensions. For further details, please mention PEE No. 411 in your request.

Of all new newspaper Unit Drive orders, more than 60% specified Cline-Westinghouse

A year ago, more than 50,000,000 people were already reading newspapers printed on presses driven and controlled by Cline-Westinghouse AC Unit Drives and Controls; this figure is now higher than ever before in the history of any manufacturer.

A great deal of confidence in Cline-Westinghouse units has been developed since Cline pioneered in AC Unit Drives. Still leading the field overwhelmingly, there are new developments to come!

AND . . . since 1919, Cline has pioneered in REELS—TENSIONS—PASTERS...NOW AND TOMORROW TOO, CLINE IS THE LEADER!

Since 1919 Cline has pioneered in increasing the paster speed from 5,000 IPH to the present speed of 50,000 IPH with the new Cline Wet-Glue Paster and AC Automatic Electric Tension. Trouble free features with incomparable smoothness and evenness.

FROM 58 CORNERS OF THE U. S. A. . . .

24 Hour service!

No matter where there may be a service call, there's a Cline-Westinghouse service-man close by. 58 convenient service stations are located strategically over the USA . . . everyone with a telephone on a 24 hour alert.

Cline-Westinghouse
Drives and Controls

CLINE ELECTRIC MANUFACTURING COMPANY
3405 West 47th Street, Chicago 32, Illinois
Los Angeles 17, California • New York 17, New York

LISTED UNDER REEXAMINATION SERVICE UL UNDERWRITERS' LABORATORIES, INC. OF

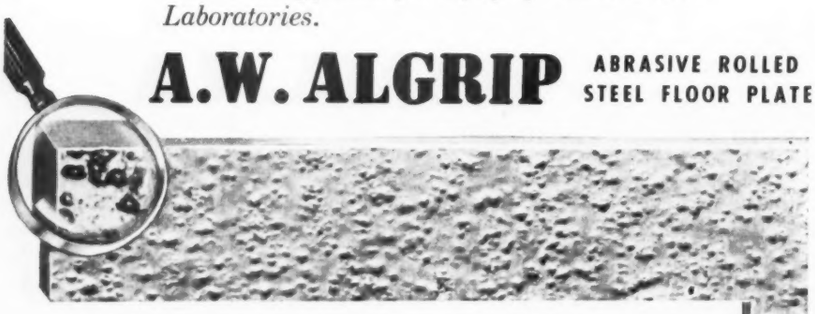
The SAFETY ENGINEER knows

. . . that A.W. ALGRIP Abrasive Rolled Steel Floor Plate eliminates costly slipping accidents.

He knows, too, that neither oil nor grease nor water can reduce the gripping power of ALGRIP's deeply embedded abrasive. ALGRIP, the *only* abrasive rolled steel floor plate, slashes insurance costs . . . requires no maintenance . . . and—because it is steel—gives many years of economical safety under heavy loads and abuse.

ALGRIP—*approved for safety by Underwriters' Laboratories.*

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Please send A.W. ALGRIP Booklet AL-31

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State____

Other products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grade

Equipment & Supplies

(Continued from Page 24)

accepts poster paints, water colors or inks, and sponsor claims the color will not chip, peel or crack. A transparent coating on both sides of the plastic permits the use of paints without spreading, states sponsor. Colors can be removed with water. Sheet size is 20 in. by 25 in. For further details, please mention PEE No. 418 in your request.

Automatic Paper Jogger

The Papertron Automatic Paper Jogger was recently announced by the Automation Development Corp. Featured are automatic control, a combing action to eliminate static

electricity, and rheostat to control jogging intensity. Two of the models are designed for heavy work in printing houses and binderies. These have a foot switch, as well as automatic control which turns the jogger on when paper is placed on it, and turns it off when the paper is removed. Model F-15 is equipped with a 12 in. by 15 in. deck and stocks are handled up to 11 in. by 17 in. A larger model, the F-20, with a deck size of 15 in. by 20 in., handles stocks up to 19 in. by 24 in. The jogger is operated on 125 v., a.c. while the combing action is claimed to eliminate much of the static electricity. A rheostat switch controls intensity of the jogging action. Two other smaller models are available for light work such as multilithing and duplicating. For further details, please mention PEE No. 413 in your request.

Tilting Padding Press

A padding press, especially designed for snap - out and other business forms, was recently announced by Preferred Pressroom Products, Inc. The Preferred Snap-out Padder is equipped with outside vertical posts which act as the far and near side guides. A board is inserted in position as a front guide. The machine tilts to load and tilts back to pad. Pile capacity is 22 in. wide by 25 in. high. The manufacturer claims that the drying unit located at the top of the press is capable of drying a one coat padded job in less than three minutes and a two coat job in about five minutes.

(*Continued on Page 35*)

GREAT FOR SWIMMING

but really RUGGED on ROLLERS

. . . unless they're **AMERICAN'S.** Then you're safe. Hundreds of leading printing establishments will tell you these rollers certainly have what it takes to take the guesswork out of summer press-work. They're built to stand up . . . to perform reliably . . . to give complete satisfaction. That's their reputation . . . and they've earned it through the years. See for yourself. For less severe conditions order AMERICAN Regular Composition or AMERICAN Special Composition; or, for tougher conditions, get AMERICAN Hi-Speed Rollers. Take a tip from users who know . . . you'll print better this summer with AMERICAN Rollers. Order yours now.

ORDER SUMMER ROLLERS NOW!

AMERICAN *Summer Composition* ROLLERS

ALL-SYNTHETIC RUBBER ROLLERS
COMPOSITION ROLLERS
LITHOGRAPH ROLLERS
MAKE READY PASTE
PADDING GLUE
LONG LYF ROLLER DRESSING

AMERICAN ROLLER CO., *1342 N. Halsted, Chicago 22 • 225 N. New Jersey, Indianapolis 4*

Nation's No. 1 Newspaper Press - - -

HEADLINER

Consistently fast, dependable, efficient production has earned the HEADLINER leadership in metropolitan newspaper plants. Fingertip Colortrol, Continuous Ink Feed, fully enclosed inking unit, widest range of color flexibility, Portable Color Fountains, sustained high speed operation, folded-edge forward delivery, enclosed oil-tight folding motion, "Y" type substructure for extreme rigidity . . . these are among features for which the HEADLINER is preferred. And Goss patented Tension Plate Lockup improves printing quality, assures exact register for color, adds to blanket life, reduces form roller wear and lengthens blanket life.

Proved by Performance - - -

UNIVERSAL

This two-plate wide, semi-cylindrical press offers big press features at moderate cost, being designed for economy both in initial investment and in maintenance. Maximum capacity is 64 pages standard format (128 tabloid pages) collect, and 48 pages (96 tabloid) straight run. The UNIVERSAL faithfully reproduces heavy solids, fine line work, halftones and all weights of type faces. Removable fountain pans allow the use of color on any printing couple. Extra color cylinders may be mounted over any unit. The UNIVERSAL can be arranged with all units and folders in line; with roll stands at the end or underneath the press; or units can be twinned to operate together or separately.

Unit design—maximum accessibility - - -

NEW UNITUBE

Engineered to enable the medium-size daily to dominate its trading area, the new Series 800 UNITUBE embodies the most advanced newspaper press design and gives extreme flexibility for full ROP color. Tubular operation — requiring only one stereotype plate per page and allowing the size of the newspaper to be increased in two-page multiples — contributes to low cost production. Goss Tension Plate Lockup assures exceptionally fine printing quality, long blanket life, quiet running and long roller wear. Controls are placed conveniently for floor-level operation. Maximum capacity is 48 pages, at a normal speed of 40,000 papers an hour.

HIGH NET PRODUCTION - - - - News pa

We invite comparison in pressrooms throughout the world, where GOSS equipment is used for dependable production at sustained high speeds.

• • •

High net production, fine printing quality, exact register, dependability, ease of operation, great reserve strength in every part, safe operation at high speeds . . . these are characteristics of *every* GOSS press.

GOSS rotary presses have been engineered to produce efficiently the finest quality of black and multi-color printing by the three principal processes — letterpress, gravure and offset — for newspapers of all sizes, magazines and commercial production. GOSS presses are the result of many years' experience in the manufacture of the world's finest newspaper, magazine and rotogravure equipment.

GOSS construction incorporates scientific engineering and precision manufacturing in our modern plant equipped with the latest types of machine tools.

Use of proper metals, accurate balancing of rotating mechanisms, and extreme care in fitting and aligning parts during assembly assure unexcelled performance, long life, trouble-free operation and the minimum of maintenance costs.

• • •

Full line of Stereotype equipment for semi-cylindrical, tubular and flatbed printing.

THE GOSS PRINTING PRESS CO.

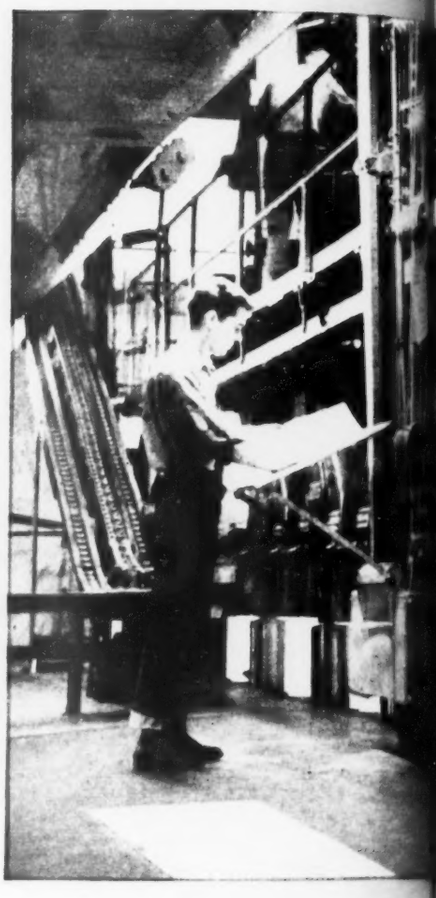
5601 West 31st Street, Chicago 50, Illinois

220 East 42nd Street
New York 17, New York

55 New Montgomery Street
San Francisco 5, California

WORLD'S LARGEST MANUFACTURER OF NEWSPAPER, MAGAZINE AND ROTOGRAVURE PRESSES

Subsidiaries: Goss Printing Press International, S. A.; Goss Printing Press Company Americas; Goss Printing Press Company, Ltd., London & Preston, England



Fine gravure printing at high speeds

GOSS SPEEDRY

This heavy construction rotogravure press, with rigid, pneumatic doctor control, assures rich reproduction pleasing to the most discriminating judge of fine printing. Goss' fully-enclosed inking system allows the use of highly volatile inks, which dry at lower temperatures, permit higher operating speeds, conserve solvents and increase safety. Goss' hypoid drive, automatic lubrication, anti-friction bearings, dynamic balancing and accessibility contribute further to efficiency and good printing quality. GOSS SPEEDRY ROTOGRAVURE PRESSES can be equipped with any one of three types of high production folders: the Headliner folder, the 3-to-2 newspaper folder or a variety of magazine folders — all with or without stitchers.

Designed for limited floor areas - - -

DEK-A-TUBE

Compactness and tubular economies make the DEK-A-TUBE a popular newspaper production press. Tubular operation requires only one stereotype plate per page and allows the size of editions to be increased in multiples of two pages. The DEK-A-TUBE can be erected with two, three or four decks, and can be arranged in tandem or twinned. Decks may be added as needed, increasing press capacity without additional floor space. Capacity ranges from 4 to 48 pages. Goss Continuous Ink Feed provides a uniform flow of ink, from inching to full speed. Removable fountain pans facilitate color changes and save ink. Any printing couple may be used for color. Normal running speed is 30,000 copies an hour.

Simple, Sure, Automatic - - -

REEL-TENSION-PASTER

Constant tension under all variations in operating conditions assures full control of the web and good register. The extreme sensitivity of the governor roller — which has a total arc of only 1/10 inch in either direction — provides instantaneous response to the slightest fluctuation in the web, allowing badly out-of-round rolls to be run and reducing web breaks by as much as 75%. There are only three buttons to press: (1) Position, to index the new roll after it has been prepared; (2) Pre-Drive, to bring the new roll up to press speed; (3) Paste. Electronic devices have eliminated all guesswork.

For publication, commercial printing

GOSS-F. &. J. OFFSET

This heavy duty, high production rotary offset press is designed for precise color printing with utmost economy. Normal operating speed is 1,000 to 1,200 feet of paper per minute. The GOSS-F. & J. OFFSET PRESS is offered in multiple designs of varying page capacity for printing black, two colors or four colors on both sides of the web. The GOSS-F. & J. OFFSET PRESS can be equipped with a sheeting device or three types of folders — for tabloid, double parallel or closed-head signatures.

ws paper, Magazine, Gravure, Rotary Offset

Precision register—speed—stamina - - -

MAGAZINE PRESSES

Goss design and dependability increase net output and reduce unit production costs. Goss manufactures the *world's fastest multi-color magazine presses,* which operate steadily at speeds from 1,000 to 1,500 feet of paper per minute with automatic electronic color register control. Page capacity ranges from 32 to 196 pages. GOSS MAGAZINE PRESSES are available for all production requirements, from single color to double two-color, double three-color, double five-color and double six-color.

For comic sections and supplements - - -

MULTI-COLOR PRESS

Printing four colors on both sides of the web at a sustained speed of 20,000 cylinder revolutions an hour, this four-plate wide press gives high production. The compact GOSS MULTI-COLOR PRESS is designed as a unit type or a deck type press for reduced floor and height requirements. Super-imposed printing couples, movable ink carriages, reversibility of every printing couple, and Continuous Ink Feed (assuring an even flow of ink at all speeds) are among advantages that make this press the first choice of a growing number of newspapers and printers.

For the weekly and the small daily - - -

COX-O-TYPE

A single-acting flatbed web press, the COX-O-TYPE prints direct from type, producing standard format newspapers of 4, 6 or 8 pages, tabloids up to 16 pages, 32-page magazine signatures and 2-page handbills. Presses may be twinned to double page capacity, or may be equipped with two folders to print two different products at the same time. The new Goss Color Attachment allows a second color to be run on two pages without sacrificing page capacity. The COX-O-TYPE offers maximum production efficiency for the smaller newspapers, while stimulating increases in advertising linage and increasing profits.

Setting New Standards in

GALLEY UNIFORMITY

and

Accuracy

Choice of

BLACK BEAUTY STEEL

The Rust Resistant Steel of greater accuracy, at competitive prices, or

ALUMINIZED STEEL

of high precision uniformity, at slightly higher cost.

•

All have Mayville's extra quality features—Safety Rolled Edges and Reinforced Corners.

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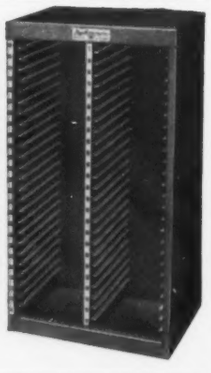
25-50-100 Galley Sizes



Special Size Galleys and Galley Cabinets Made to Order

OTHER QUALITY MAYVILLE PRODUCTS

• *Movable Stock Racks* • *Offset Filing Cabinets*

Several Excellent Dealer Territories Still Available

See Your Dealer or write for literature

Mayville METAL PRODUCTS CO.

MAYVILLE, • WISCONSIN

ONLY

WETTER

ROTARIES

have SAS* appeal

Specially designed for today's rotary presses, this sturdy cam-actuated machine prints numbers in a line parallel to axis of the impression cylinder.

SPEED

—in ability to keep pace with the fastest presses

—in set-up time with Quik-Lok Clamp

ACCURACY

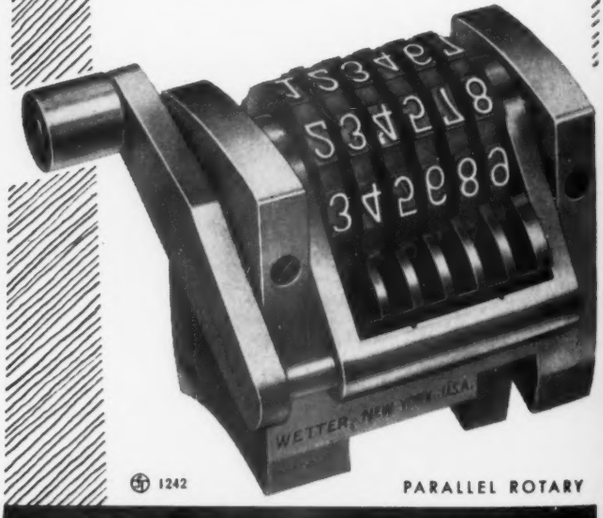
—in number sequences

—in in-line printing

SHARPNESS

—in impressions

Wetter also manufactures other models for flat bed or cylinder presses to meet all numbering requirements of the printing trade. Write today for descriptive folder.



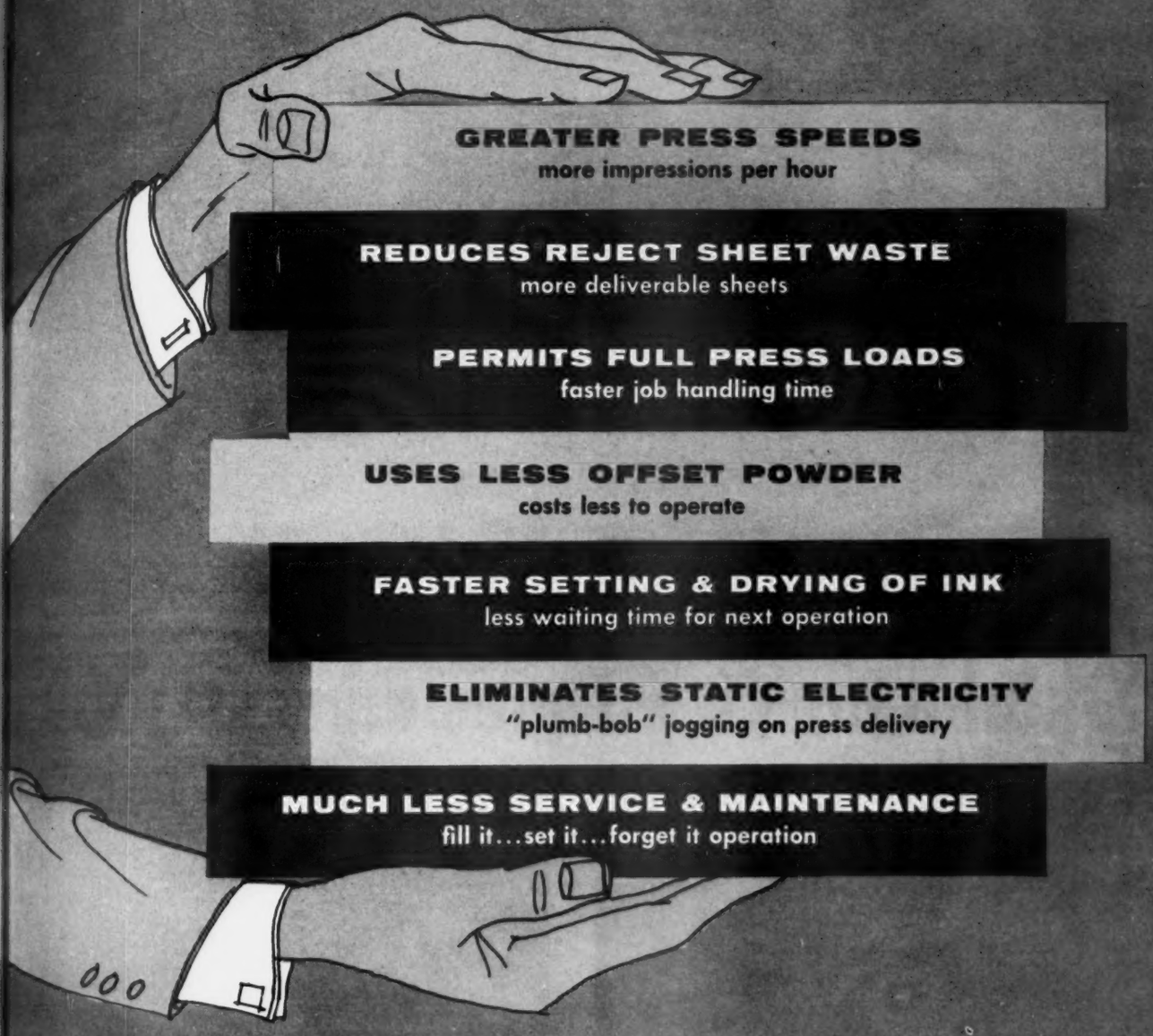
1242 PARALLEL ROTARY

WETTER NUMBERING MACHINE CO.

ATLANTIC AVENUE & LOGAN STREET · BROOKLYN 8, N.Y.

ONLY UNION MADE NUMBERING MACHINE IN U.S.A.

ONLY OXY-DRY GIVES YOU ALL THESE ADVANTAGES



GREATER PRESS SPEEDS
more impressions per hour

REDUCES REJECT SHEET WASTE
more deliverable sheets

PERMITS FULL PRESS LOADS
faster job handling time

USES LESS OFFSET POWDER
costs less to operate

FASTER SETTING & DRYING OF INK
less waiting time for next operation

ELIMINATES STATIC ELECTRICITY
"plumb-bob" jogging on press delivery

MUCH LESS SERVICE & MAINTENANCE
fill it...set it...forget it operation

ANY one of the above advantages make OXY-DRY superior to all other offset prevention methods. Combined, they give the printing plant that has OXY-DRY equipment, a tremendous competitive advantage that means more business, more profits and more satisfied customers.

If you want to increase the number of deliverable impressions per hour for every press in your plant, then you need OXY-DRY sprayers...write, wire or phone us today for more details. Installations now being made for all press sizes from 17x22 and larger.

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We are interested in OXY-DRY Sprayers; please send more information ☐ or your representative.

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DEPENDABLE POWER provided by G-E electronic press drive on Goss Headliner permits Oklahoma Publishing Company to run editions of *Oklahoma City Times* and *The Daily Oklahoman* at average of 60,000-pph, when required in daily production.

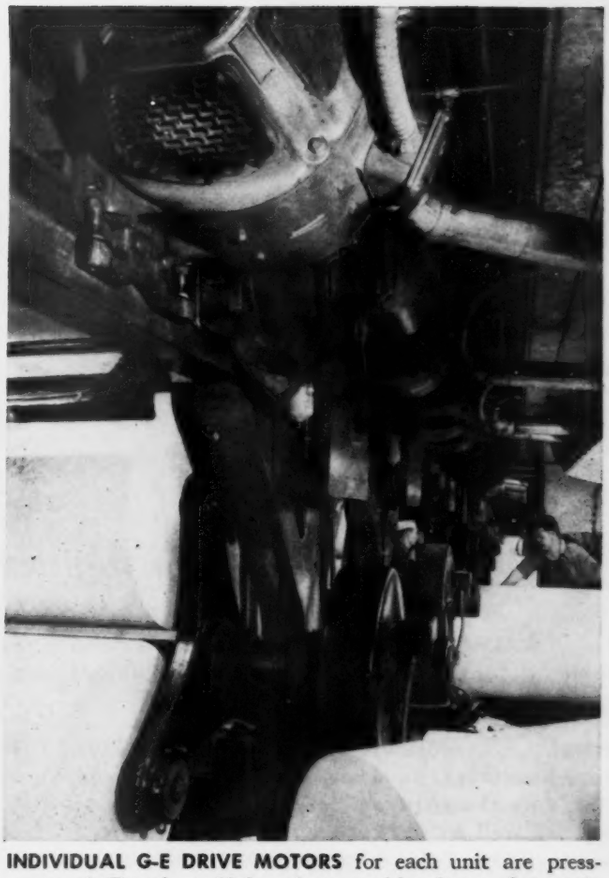
Oklahoma City Times runs 81,000

FULL SPEED PASTES are no problem—even at 60,000-pph—because Wood Automatic Autopasters powered by G-E Thy-motrol* drives provide positive splices regardless of press speed.

*Reg. General Electric trademark.

PRODUCTION CONTINUITY is aided by dependable control; G-E drive eliminates threading motors, gears, clutches, and mechanical brakes, greatly reducing mechanical maintenance.

RUGGED, LONG-LIFE G-E power and control equipment is housed in these compact cubicles for easy accessibility; simplified control has long-life tubes, contains no power contactors.



INDIVIDUAL G-E DRIVE MOTORS for each unit are press-mounted. Rated at 50 hp, they provide plenty of smooth, dependable power for high-speed newspaper production.

48-page final edition in 1½ hours

G-E electronic drive powers new Goss Headliner press to meet 60,000-pph pace for all editions at Oklahoma Publishing Company

Mr. L. S. Vance, Business and Production Manager of the Oklahoma Publishing Co., publishers of *The Daily Oklahoman* and *Oklahoma City Times*, says of their new G-E electronic press drive: "The ease of installation and start-up met all our specifications. We started up on time because all the equipment arrived on the promised delivery dates.

"Recently, we were running a few minutes late and needed 57,000 papers during the next hour. We ended up with a *net* production of 57,000 in 56 minutes —and we hit the street on time. The presses actually exceed 60,000-pph many times during daily production." The Oklahoma Publishing Company editions now start later and finish earlier using one press with G-E electronic press drive than they did previously using two presses.

Dependable power, smooth acceleration and braking, as well as dependable service, are only a few of the many advantages of low-maintenance G-E electronic press drive. For complete information contact your nearest General Electric Apparatus Sales Office or write for Bulletin GEA-5523 . . . today!
General Electric Co., Schenectady 5, N. Y. 653-26

Engineered Electrical Systems for Newspaper Plants

GENERAL ELECTRIC

Register
Full R.O.P. Color
Automatically

Maintain multi-color register at all operating speeds

Now . . . R.O.P. Color becomes practical . . . and profitable . . . for any progressive, advertising-minded newspaper.

Practical **. . . because the old-time hazards, delays, costs and heartbreaks have been reduced or eliminated. And that's no exaggeration. Today . . . at Milwaukee Journal, as well as at Washington Post and Times-Herald . . . R.O.P. Color is running at high speed day and night. And, fast or slow, top quality multi-color register is maintained throughout the run to an amazingly high degree of perfection . . . and to the complete satisfaction of advertisers and subscribers.**

Profitable **. . . because advertisers love it. They know the pulling power of color. They'll buy it. They're buying plenty of it now . . . and paying handsomely for it. But they demand accurate register throughout the run. Now they can have it . . . and you can give it to them.**

HURLETRON Automatic Circumferential Register Control

Also used for web-fed letterpress printing.

This remarkable electronic equipment is not new. Practically every color rotogravure printing plant in the country has been using Hurletron Register Controls for years. And where will you find finer examples of accurate color register at high speed?

Now, this same equipment has been adapted successfully to R.O.P. Color for newspaper presses. Its practical value and profitability have been fully demonstrated and proved at Milwaukee Journal and Washington Post and Times-Herald.

Here are a few of the advantages this equipment provides:

1. Accurate, automatic register of all colors within a few thousandths of an inch.

2. Holds register established at low speeds up to highest operating speed.

3. High speed corrections at splices reduces the number of bad copies.

4. Exclusive patented ink mist expelling web scanner eliminates cleaning.

5. Provides pressman with continuous indication of running register and enables him to make adjustments in register in known increments.

6. Simple, easy operation.

Check these advantages carefully. See what you have. Accurate register with a resultant high quality, easily saleable product . . . minimum manpower requirements . . . greatly reduced waste of printed stock. Added up they mean self-liquidation of the control equipment in less than a year on the average newspaper press printing color.

R.O.P. Color is here to stay. With Hurletron Register Control you can make it practical and profitable. Want more details? Write us today. There's no obligation.

ELECTRIC EYE EQUIPMENT COMPANY

1930 Fairchild Street **Danville, Illinois**

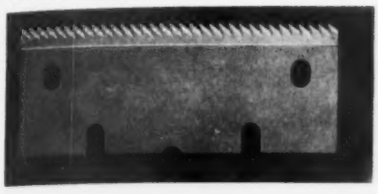
Manufacturers of Hurletron automatic controls for Paper and Board Caliper and Weight; Center Line and Side Web Guide; Cut-off and Back-Up; Moisture.

Equipment & Supplies

(Continued from Page 26)

Two or three turns of the crank handle drops the platen on the stub edge of the business forms. Other features are: Steel and aluminum construction; four 5 in. swivel casters; 31 in. wide, 30 in. deep and 72 in. high measurements. Optional equipment is a rubber cable to length required. For further details, please mention PEE No. 417 in your request.

Press Folder Cutting Knives—Moore Production Tool Specialties announces that Moore printing press folder knives are made



from a special formula steel, are precision ground, and are engineered to provide keen cutting edges and durable shanks. It is stated that the action of cutting rubbers with these knives is greatly improved and rubber life is lengthened. Special teeth furnished to specifications. For more information please mention PEE No. 435 in your request.

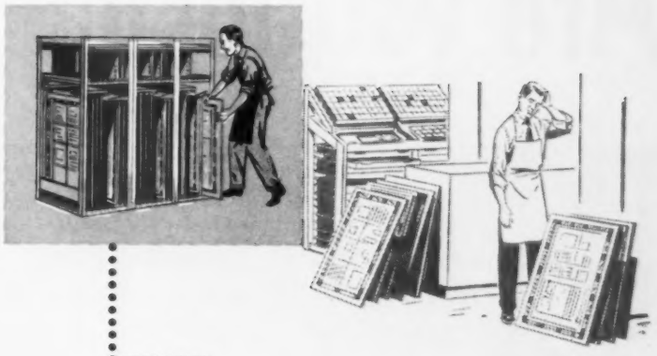
Static Control System

The Hewson Co., Inc., has announced the introduction of the Model 100 TAKK Special Static Control System. The unit is applied where space is restricted and is used when static problems are not severe and processing speeds are low. The model 100 is designed for office machines, small printing presses and similar equipment. Stainless steel emitters and target rods are used; and a new elastic material that is resistant to mechanical and electrical shock and high temperatures is featured. The TAKK Model 100 static eliminator bars are available in multiples of 4 in. up to any length required. For further details, please mention PEE No. 406 in your request.

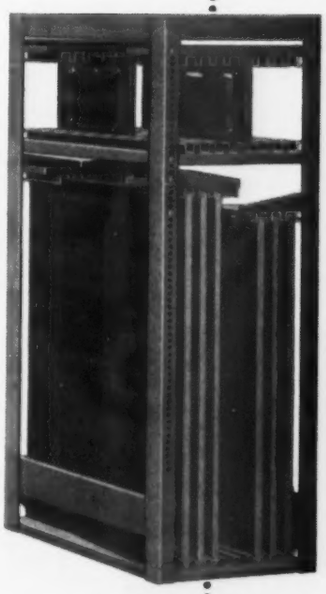
Electric Counters—A life expectancy of 300 million counts is claimed by the manufacturers of Super-Wizard electric counters. Produced by Production Instrument Co.,

Super-Wizards are rated at 1000 counts per min., and operate at speeds up to 1600

(Continued on Page 108)



Another boost from Hamilton toward higher Composing Room Profits!



Adjustable Chase Rack 1808

20" x 36" x 63". Outside frame with top, base platform, and two full length top guides (A). Illustration includes optional adjustable platform (B), and adjustable half-length top guide (C).

fastest . . .
safest
form storage

File your forms fast in Hamilton chase racks. Know they're completely protected by heavy gauge steel, safely channeled apart, available instantly when you need them. It's the truly modern storage system that saves man-hours, prevents costly damage to forms, and naturally helps profits climb. Keeps your composing room free of inefficient clutter, too, and saves lots of floor space.

Hamilton racks come in a variety to meet any chase storage problem you have. See your Hamilton dealer for full information without obligation.

Also by Hamilton: finest type cabinets, imposing tables, newspaper tables, ad assembly cabinets, galley cabinets, trucks, work benches, miscellaneous units and accessories of many kinds.

Hamilton
PRINTERS EQUIPMENT

HAMILTON MANUFACTURING COMPANY • Two Rivers, Wisconsin

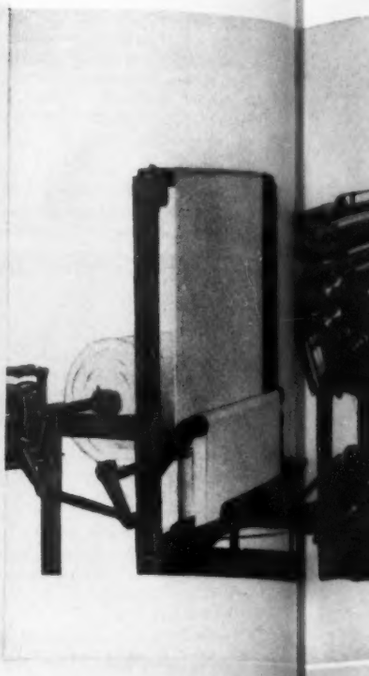
Are you losing BUSINESS

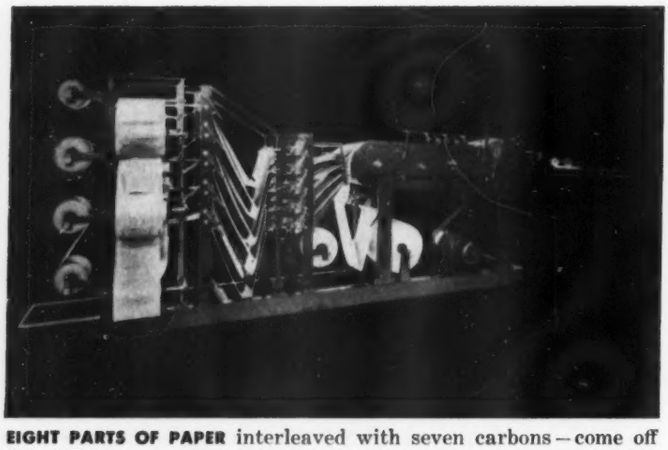
You may be doing just that every day—losing business on forms your present equipment can't compete for. ATF makes the broadest line of special presses designed to produce business forms at low cost.

With the world's broadest line to choose from, you'll find any general-duty or special business forms press you need at ATF. You can number, imprint, perforate, line-hole or teletype-punch, carbon spot, carbon interleave, and deliver in flat sheets, zigzag packs, folded forms or rewind—*right on the press.* Talk about production ! You get guaranteed 15,000 revolutions or complete sets per hour.

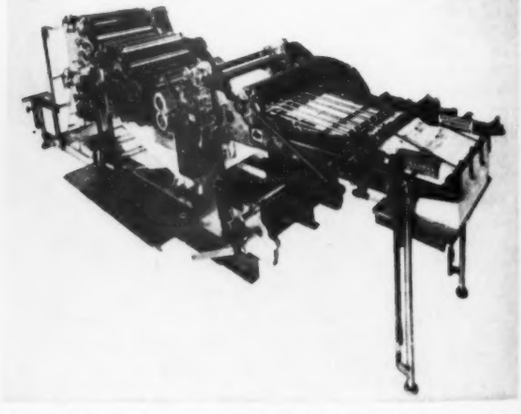
ATF Webendorfer web-fed know-how is at your disposal. Our engineers are glad to discuss your specific requirements and the custom features that will meet them. Write for our new illustrated brochure on web-fed business form presses and machines. AMERICAN TYPE FOUNDERS, Mount Vernon Division, *a subsidiary of Daystrom, Inc.,* Mount Vernon, N. Y.

W.4.2





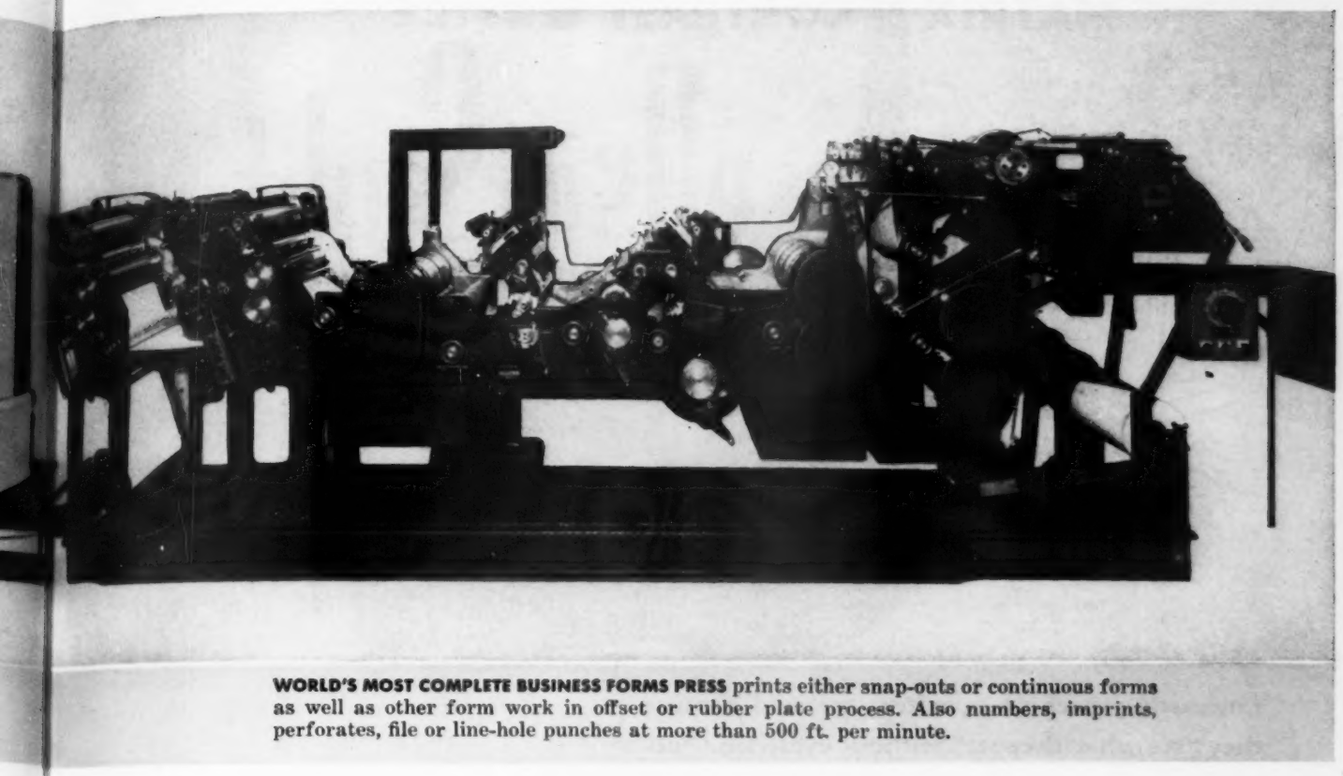
EIGHT PARTS OF PAPER interleaved with seven carbons—come off this ATF rotary collator. Machines which can produce up to 12,000 8½ x 11 sets per hour are available. Continuous form collators, section collators and printing collators also available to register, collate, glue, perforate and cut off finished forms.



SLOW-DOWN FLAT SHEET DELIVERY uses tapes to slow down sheets coming off press at high speeds, to pile delivery. Other available deliveries include former folder for fold-over statements, zigzag folder for continuous forms, and rewind rolls.

ATF'S NEW MOUNT VERNON PLANT for production of web-fed offset, flexographic rotogravure and paper converting machinery.

S FORMS printing...



WORLD'S MOST COMPLETE BUSINESS FORMS PRESS prints either snap-outs or continuous forms as well as other form work in offset or rubber plate process. Also numbers, imprints, perforates, file or line-hole punches at more than 500 ft. per minute.

ATF Webendorfer Engineering Know-How gives you:

Custom-built line of business form presses

- General duty, check-, sales- or blank-book presses
- Wet or dry offset, rubber plate and/or stereo printing
- Zigzag or former folder, rewind or flat-sheet delivery
- Snap-out, continuous, printing and sectional collators

Trouble-free flexible operation

- Automatic tension and paper infeed control
- Automatic infeed brake mechanism prevents web breakage
- Running and side register controls between all units
- Simple adjustment for accurate roller setting
- Combination numbering and imprinting unit
- Teletype or line-hole punching unit precision engineered
- Cross and vertical perforators
- Tab cutting and skip perforation

BETTER, MORE PROFITABLE
PRINTING FROM THE
WIDEST LINE OF PROCESSES

Gravure..Letterpress..Offset..Flexographic

MATRIX CONTRAST SERVICE Sells on Sight

Linecasting machine operators are sold because they "see what they set" without eyestrain. Publishers and printers stay sold because Matrix Contrast eliminates 25% of all errors in linecasting machine composition.

Matrix Contrast Corporation has been in successful operation for over 25 years, and today services leading publications from coast-to-coast through 6 conveniently located service branches and 31 trained service crews. The Matrix Contrast method is the time-tested system of processing your matrices in Black and White or Colors in your plant without interrupting your regular production schedules.

REMEMBER,

that Matrix Contrast Service is the economical convenient plan to keep your linecasting matrix reference marks clean and highly visible.

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MATRIX CONTRAST SERVICE

MATRIX CONTRAST CORPORATION

154 West 14th Street, New York 11, N. Y.
326 W. Madison Street, Chicago 6, Ill.
1105 Trenton Street, Los Angeles 15, Calif.
European Agents: Funditor, Ltd., 3 Woodbridge Street, Clerkenwell Green, London, E.C.1.

The old mouse trap theory used to cause people to beat a path to your door—but today quality alone isn't sufficient.

Mouse Trap Philosophy

is out of date—but conveniences to be afforded by suburban location of your new plant are major objectives to be considered during planning stages.

By ROBERT W. DICKERSON*

**Architect and Printing Engineer, Cleveland, Ohio.*

LOCATION is a factor of recognized importance for any commercial or industrial enterprise. The time may have been when the maker of the best mouse trap in the world could rest comfortably in the assurance that a well-worn path through the forest would soon lead the world to his door. But today he has no misgivings as to his competitive position if he assumes that quality of product—always of first importance—is the only requisite for success. He knows, whether he's in the mouse trap business or operating a publishing or printing establishment, that location is important and that he cannot disregard its impacts with impunity.

The trend away from close-in urban plant locations and toward perimeter, even rural, locations on the surface may appear to support the old mouse trap maker philosophy or even a back-to-the-land sentiment, but under examination they reflect a serious, hard-headed approach to the problem of finding the best location for an operation.

What then are some of the desirable features to be sought in a plant location, and in what ways are they better provided in the outlying location? Let us list and examine a few of those which have come to our attention. Here they are:

(a) More and less costly space.
(b) Better transportation and traffic facilities.
(c) Better light, air and cleanliness.
(d) Greater convenience and accessibility.

Without attempting to establish any statistical figures, it can be said without fear of contradiction that the one outstanding reason why new locations are sought and new plants are built is to obtain more space. Present space has been outgrown and operations are handicapped by lack of space. The need for expanded facilities cannot practicably be met on the present site.

Urban Land Costs

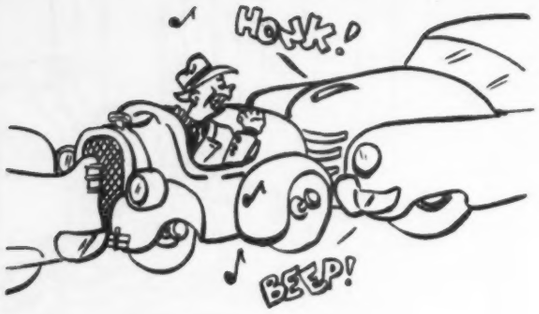
Urban land costs, through the years, have advanced in most localities to the point where only intensive, high square-foot productivity can support them. This means that a printing or publishing operation, if it is to break even on land of high valuation, has no alternative but to stack up its production operations in a multi-story plant. That type of arrangement in most instances is not conducive to efficient operating layout. In most suburban localities land costs are such that enough land can be acquired to permit efficient planning without undue land cost penalty.

Avid Consumers of Space

Most printing and publishing operations are avid consumers of space. Printing presses require not only the square feet of space under their feet, but generous aisle widths around and between them for the movement of stock, work in process, finished work, etc. Large storage areas are needed for raw stock, for work in process and for finished work. For hand, machine and photocomposition, as well as engraving, bindery and similar operations, the total space requirement may easily amount to much more than two to three times the actual space occupied by equipment if proper aisles are provided for the movement of work and personnel. All of this means that a plant laid out for efficient operation, whether it be small, medium or large, imposes space demands which argue strongly for land valuation in keeping with possible per-square-foot production return.

Parking Space

Another feature which can no longer be disregarded is the need for parking space. Without going into detail as to what has happened through the years with respect to living habits, it can be accepted as factual that the automobile is here to stay, that it will continue to be a major means of transportation for plant personnel, and that parking space for the cars of executives and employees must be provided. Only on a suburban or rural site would that provision be a practical possibility. A great many of our cities now make the issuance of a building permit contingent upon provision of ample



Strangulated traffic and lack of ample parking space for customers and employees is all right if one has time to be traffic-strangulated—but who has the time?

parking space. That requirement alone rules out the use of high-price close-in land for employee parking. Most establishments also face the need for parking facilities for those who do business with them. When the potential buyer of your product has to leave his car blocks away from your place of business and walk or employ public transportation to reach you, you have provided him with an element of sales resistance. You can't even afford to make it hard for the fellow who has something to sell to reach you.

Avoid Strangulated Traffic

Traffic congestion in most urban areas has made the movement both of raw materials and finished products an increasing problem. Time can mean money outside the plant as well as within. It should be remembered that a production operation embraces both the acquisition of the raw materials and the delivery of the finished product. Many of the advantages of a well planned plant can be lost by strangulation of the flow of either of these.

Proximity To Railroad

Publishers recognize the highly perishable quality of the newspaper and the demonstrated necessity for getting it into the hands of the reader at the earliest possible moment. While not many of them have gone to the length of selecting a suburban location, an increasing number are locating their plants with primary respect to traffic flow and, wherever possible, on sites with railroad trackage available. An example of such location is the new plant of the Philadelphia *Bulletin* now under construction on Market St. at 31st. Such an uptown location would have been labeled a foolhardy venture a few years ago. Its adjacency to railroad trackage will mean year-after-year economy in the handling of newsprint.

Windowless Plants

It is not within the scope of this discussion to argue the merits of natural vs. artificial light nor of natural ventilation vs. mechanical ventilation and/or air conditioning. It remains a fact, however, that an increasing number of industrial plants are being built without windows, dependence thus being placed in mechanical means of supplying light and air. A windowless plant obviously would provide little advantage in a rural location over a close-in city site in these respects. Close control of temperature and humidity is regarded as essential for many printing processes. For such work, windows as a means of ventilation have little to offer. It must also be said that there is a growing preference in industry for adequate, well controlled artificial illumination over the widely variable and difficult-to-control natural variety. For the small establishment in which close control either of atmosphere or light is not too important, the advantages of improved natural light and ventilation have the strongest appeal. It should also be said in passing that for process work requiring a high degree of cleanliness the suburban location offers distinct advantage if natural ventilation is to be depended upon.

Mouse Trap Theory Passe

Convenience. That's where the old mouse trap comes back into the picture. So long as he was the only builder of mouse traps, or his product was so vastly superior that no self-respecting mouse would approach one of his competitor's contraptions, there was possibly some basis for letting traffic break its own path through the woods. But, when one competitor bulldozed and paved a road to his door, and another set up his shop in a convenient cross-road location, a new day had dawned and the mouse trap maker was well on the way to learning that quality is not all. There's service, convenience and a lot of other such features which keep the business going.

Building of windowless plants with constant artificial lighting and ventilation, if not air conditioning, is on the up. Give these matters your best planning attention.

Suburban Conveniences

In earlier days when cities were more compact, when traffic as we now experience it was unknown, the close-in location for business and industry afforded the highest degree of convenience. Such a location was convenient for the public. It was convenient for the workers in the establishment. It was convenient both for receipt of raw materials and for the delivery of the finished products. Recognizing the changes and developments which have occurred, particularly as reflected in transportation and traffic, there can be small question that a far greater degree of convenience can be provided today in the suburban location than is possible in the average close-in spot. Traffic for the close-in location, particularly at the time of day when workers are arriving and leaving, is usually heavy and slow moving and often snarled. For those visiting the plant at other times of the day there is the problem of parking. As has already been observed, this is important both for the boss, the boys and the public.

Convenience for the receiving of raw materials and for the delivery of finished work, we have already agreed, is a factor in efficient production. A well chosen outlying site can make important contributions in that direction.

To Summarize:

Adequate space, not only for efficient operations within the plant but also for parking and many other amenities of convenience and efficiency are more readily and economically available with the outlying or suburban site.

Traffic and transportation problems are generally less severe for sites removed from in-town, congested areas.

Better conditions with respect to natural light and ventilation may be expected in an outlying location.

Greater convenience for plant personnel, for the public and for the receiving and dispatch of raw materials and finished product is one of the obvious advantages of the suburban site.

Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Composing Room

ATF TYPE FACES

Recent foundry type face additions by American Type Founders are presented in an eight page folder printed in two colors. Included are specimen lines of Brody, Dom Casual, Dom Diagonal, Dom Bold and Franklin Gothic Wide. Size range of all these faces extends from 18 pt. up to and including 72 pt. Also shown in the folder are 36 pt. and 48 pt. Troyer Zodions decorative spots, as well as 30 pt. and 36 pt. Steelplate Gothic Bold. Please mention PEE No. 121L when requesting a copy.

MORRISON SLUG STRIPPER

Bench and cabinet models of the Morrison Slug Stripper are described in a four page bulletin issued by The Morrison Company. Explained in the bulletin is the method for stripping slugs and type characters on the machine and securing them in a form. Examples of ads in which stripped slugs were used are shown. Specifications of the slug stripper are given. Please mention PEE No. 122L when requesting a copy.

TYPE METAL INFORMATION

Type Metals—Their Characteristics and Their Performance is the title of a 64 page booklet available from Imperial Type Metal Co. Its contents include facts about type metals, their uses and care. Parts are devoted to linecasting machine, Monotype, stereotype and electrotype metals. Another chapter deals with how to take a sample for an analysis and the analysis itself. The chapter on How To Keep Metal Fit contains many valuable aids. It measures 6 in. by 9 in. Please mention PEE No. 177L when requesting a copy.

BLUE STREAK LINOTYPES

Linotype Models Nos. 31 and 32 are illustrated and described in Mergenthaler Linotype Co.'s well illustrated 12 page folder. Range of the single distributor machine is from 4 pts. to 18 pts. in normal width type faces, although up to 30 pt. size may be set in condensed faces. A number of mechanical features are also illustrated. For a copy please mention PEE No. 123L in your request.

MOHR MEASURE CONTROL

Mohr Measure Control, a feature of the Mohr saw attachment for linecasting machines, is the subject of a bulletin prepared by Mohr Lino-Saw Co. Advantages of the measure control are pointed out particularly for setting odd measures for different newsprint widths. A diagram of the measure controls installed on a linecasting machine is included. Please mention PEE No. 124L when requesting a copy.

FOUNDRY TYPE FACES

Display and script type faces produced by Berthold Type Foundry of Germany are shown in specimen form in a booklet issued by Amsterdam Continental Types and Graphic Equipment Inc. Included among the type faces are Derby, Ariston, Palette, Caprice, Post Title, Dynamic and Normande. Please mention PEE No. 125L when requesting a copy.

TYPE METAL REMELTING

Surface Combustion Corp.'s four page illustrated letterhead size bulletin is descriptive of Type Metal Remelting Furnaces. Made in capacities from 100 lbs. to 3200 lbs. of metal to be remelted. Pressure and atmospheric gas burners. Complete data is furnished. For a copy please mention PEE No. 126L in your request.

GROUP OF BULLETINS

A group of six four page miniature bulletins is offered by H. B. Rouse & Co. Each measures 3½ in. by 6 in. Descriptive of Mitering Machine, Newspaper Files and File Racks, Lead and Rule Cutter, Composing Sticks, Line Gauges, and Sennett Positive Assembler. For this group, please mention PEE No. 127L in your request.

PARTLOW GAS CONTROLS

Partlow gas controls for Linotype and Intertype machines are described in a two page, 3½ in. by 6¼ in. bulletin issued by Linotype Parts Co., Inc. Illustrations of the controls include a mercury-actuated flexible element. Please mention PEE No. 128L when requesting a copy.

LINECASTING MACHINE TYPE FACES

Five bulletins are available from Intertype Corporation in which are displayed type faces for Intertype linecasting machines. The following faces comprise the group: Regal No. 2a with Cairo Bold No. 2; Cornell; Cairo; Lydian with Italic and Lydian Bold with Italic; and Futura and Vogue. Specimen lines of the faces in the sizes available are included in the bulletins. Four of the bulletins are printed in two colors. Please mention PEE No. 129L when requesting copies.

COMPOSING ROOM SUPPLIES

Three bulletins are available from American Publishers Supply, Inc., in which are included descriptions and illustrations of supplies for the composing room. Some of the items listed in the bulletins include Intertype and Linotype belts, skimmers and ladles, brushes, plunger cleaning machine, carborundum stone, oiling device, Linotype pot unit and keyboard rollers. These bulletins are catalog pages (5½ in. by 8½ in.) punched for a loose leaf binder. Please mention PEE No. 130L when requesting copies.

TYPE METALS BULLETIN

A descriptive bulletin entitled *The Secret of Federated Castomatic Type Metals* has been published by Federated Metals Div., American Smelting and Refining Co. Included are several 150X photomicrographs of Linotype and Monotype pigs showing top and bottom comparisons. Advantages of Castomatic metal are listed. Printed in two colors, the bulletin measures 4 in. by 8 in. Please mention PEE No. 131L when requesting a copy.

TELETYPESETTER TAPE

A kit of eight samples of colored Spartan Perforator Tape has been assembled by the Link Paper Co. Also included are specifications of the tape. For a copy, please mention PEE No. 134L in your request.

Platemaking

PHOTOCOMPOSING SPACER

Specifications, illustrations and descriptive material presented in an eight page bulletin, explaining how step and repeat work can be done by hand with the Chesley F. Carlson Co. Photocomposing Spacer. In the bulletin is explained how precision work can be done in composing plates, negatives and autopositives. For a copy, please mention PEE No. 132L in your request.

OFFSET TYPE ROLL FILM CAMERA

The Chemco Offset Type Roll Film Camera is described and illustrated in a four page 8½ in. by 11 in. bulletin published by Chemco Photoproducts Co., Inc. Film controls, film holder control, screen distance setting, electronic exposure control, stop rationer, focusing scales and general specifications. Max. line negative is 21 in. by 24 in.; max. screen size is 20 in. by 24 in. For a copy please mention PEE No. 135L in your request.

NOLAN STEREOTYPE SAW

Two page letterhead size illustrated bulletin published by Nolan Corporation is descriptive of the Nolan Heavy Duty Stereo Saw. This equipment is designed for fast cutting. Double V belt 2 h.p. motor drive. An 87 pica gauge with or without 148 pica extension is available with new saw. For a copy please mention PEE No. 136L in your request.

FEATHER ACTION RADIAL ROUTER

In this illustrated bulletin is described the J. A. Richards Co. Feather Action Multiform Radial Router for flat work. For a copy, please mention PEE No. 137L in your request.

ROUTING MACHINE

Operating instructions and specifications of the Dixon Router are included in bulletin sponsored by Automatic Saw Sharpening Co. The machine is designed for routing stereotypes, electrotypes, zinc and copper plates, wood, slug composition, foundry type, and linoleum and rubber plates. It is

(Continued on Next Page)

Literature Request Coupon

After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

PRINTING EQUIPMENT *Engineer*
1276 West Third St., Cleveland 13, Ohio

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Your Company Name and Address

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Few ANPA Booths Yet Available

Manufacturer and supplier companies contemplating exhibits at the ANPA Mechanical Conference but who have not yet engaged space, should do so promptly. There are only a limited number of spaces remaining. These will be allotted on a first come first served basis. The ANPA Mechanical Conference will be held at Edgewater Beach Hotel, Chicago, June 6, 7 and 8. Please send your request for reservation to *Printing Equipment Engineer*, 1276 W. Third St., Cleveland 13. Phone: PRospect 1-0088.

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available in bench and pedestal models. Please mention PEE No. 139L when requesting a copy.

DEEP ETCH PLATES

An instructional manual on deep etch platemaking has been published by Harris-Seybold Co. The 12 pages of the manual include a step-by-step explanation of techniques for making deep etch offset plates. The descriptions are accompanied by illustrations. Please mention PEE No. 140L when requesting a copy.

METAL PUMP INSTRUCTION BOOKLET

An instructional eight page booklet on the International Newspaper Supply Corp.'s Electric Metal Pump for controlled casting of stereotype plates is available. Installation, operation and maintenance of the pump unit are among its contents. Also included are two full page illustrations of the pump with parts identified, and a listing of parts. The bulletin is of letterhead size. Please mention PEE No. 141L when requesting a copy.

OFFSET FILING CABINET

A cabinet designed for the storage of artwork, negative, offset printing plates, blueprints, etc., is the subject of a six page folder prepared by Mayville Metal Products Co. Recessed base, dust-tight and all steel construction are among the features of the cabinet mentioned in the folder. Part of the 3½ in. by 6½ in. folder is devoted to a description of Mayville's vertical stock racks. Please mention PEE No. 142L when requesting a copy.

STEREOTYPING BOOKLET

A 44 page booklet entitled *How To Get the Most from Your Dry Mat and Stereo Expenditures* is sponsored by Certified Dry Mat Corp. Included are parts on plate duplicating problems, the field of the flat cast, shrinkage, and mats for flat casting. Illustrated. The 5 in. by 6¾ in. booklet is bound in a paper cover. Please mention PEE No. 143L when requesting a copy.

GRAVURE EQUIPMENT CATALOG

A 78 page catalog of rotogravure equipment for plating, grinding, processing and printing prepared by Standard Process Corp. Included are descriptions and illustrations of presses, doctor blade grinder, grinding and polishing machines, intaglio stones, gravure cylinders, copper and chrome plating equipment, layon machines, etching trucks and spot plating equipment. The plastic bound catalog measures 8½ in. by 11 in. Please mention PEE No. 144L when requesting a copy.

PLATE MOLDING PRESSES

The Acraplate molding presses for the production of molded rubber and plastic printing plates are discussed in an eight page booklet issued by Lake Erie Engineering Corp. Several models of these presses are illustrated. Descriptions of the presses' general design, heating, controls and standard and optional accessories are included. Specifications are given as well as a list of Acraplate users. The two color bulletin is of letterhead size. Please mention PEE No. 145L when requesting a copy.

RADIAL ARM ROUTER

The Wesel Manufacturing Co. has issued a four page bulletin with illustrations and descriptive material concerning the Wesel Radial Arm Router and including brief descriptions of the Heavy Duty Router Head and Wesel Gold Dot Router Bits. Complete specifications of equipment are given. For a copy, please mention PEE No. 146L in your request.

GROUP OF PLATEMAKING BULLETINS

A group of eight letterhead size illustrated bulletins about platemaking equipment has been prepared by C. B. Cottrell & Sons Co. Illustrated and described are Cottrell-Claybourn curved plate solidifier, curved plate shaving machine, combination roughing and shaving machine, curved finishing saddles and slabs and hand finishing tools, flat plate solidifying and shaving machine, precision gauging machine and curved plate proof press. Please mention PEE No. 147L when asking for this group of bulletins.

PHOTO-OFFSET PLATES

A cost comparison chart of pre-sensitized versus zinc plates is included in an eight page 3 ¾ in. by 8½ in. zig zag fold bulletin. Also included in the illustrated bulletin prepared by Minnesota Mining and Mfg. Co. is descriptive material of the advantages of the aluminum offset plate. For a copy, please mention PEE No. 148L in your request.

MEASURING HALFTONE DEPTH

A depth microscope for measuring depth of halftones is described in a four page illustrated bulletin, offered by Alico, Inc. The microscope is made by Bausch and Lomb especially for measuring depth according to specifications of the ANPA Research Laboratory. For a copy, please mention PEE No. 149L in your request.

PLATE CLEANING MACHINES

General Plate Makers Supply Co. has published an illustrated leaflet explaining Explate Hot Process Cleaning Machine and the Explate Cold Process Cleaning Machine. Specifications are given and also a description of cleaning compounds to be used. For a copy, please mention PEE No. 150L in your request.

SOFT METAL MELTING EQUIPMENT

A four page, illustrated guide for the selection of heating equipment and control for soft metal melting applications is now offered by the General Electric Co. The bulletin shows the steps to be taken in selecting cast in immersion heaters for melting specific types of metals, and varying quantities of each type. Another section describes thermostats and manual or automatic controls for each heater and the third section is devoted to selection and application of soft metal melting pots. For a copy, please mention PEE No. 186L in your request.

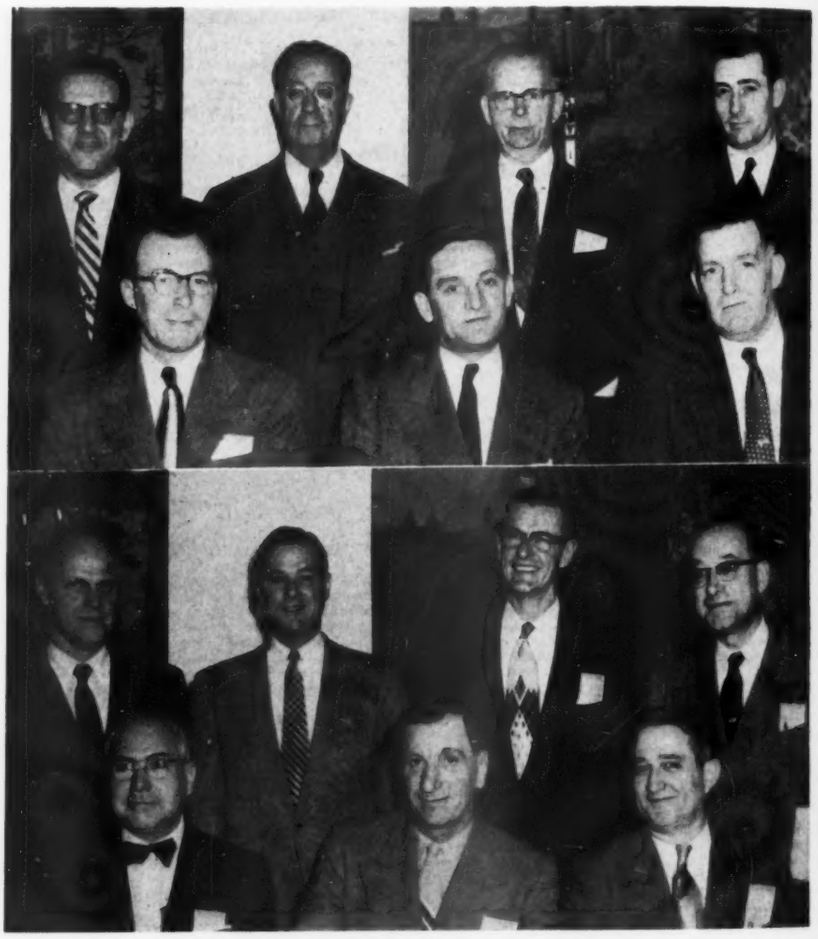
TUBULAR MASTER ROUTER

The Sta-Hi Corporation recently issued a four page bulletin on its new Sta-Hi Tubular Master Router specially designed for the routing of tubular press plates. The illustrated bulletin describes the features of the machine and gives specifications as well as giving a simple explanation of how the machine works. For a copy, please mention PEE No. 187L in your request.

HYDRAULIC MOLDING PRESSES

Specifications, uses and illustrations of the Trumax Hydraulic Molding Press, manufactured by The Monomelt Co., Inc., are given in a four page, two color bulletin. The molding press features a single lever control which starts and stops motor, holds pressure, inches pressure back and lowers platen. For a copy, please mention PEE No. 188L in your request.

(*Continued on Page 103*)



New York State Newspapermen Meet—The second annual New York State Capital District Mechanical Conference which was held recently in Albany, N. Y., attracted an attendance of 160. Some of the participants in the two day program are shown above. All names read from left to right. Top picture (seated) Francis Jardieu, stereotype foreman, Utica *Observer-Dispatch*; James Morris, mechanical superintendent, Albany *Knickerbocker News*; Ken Gray, press superintendent, Schenectady *Gazette*. (Standing): retiring Conference President Floyd Laurenty, mechanical superintendent, Schenectady *Union-Star*; John A. Burke, former production manager, Gannett Newspapers; Alvan Van Voorst, press foreman *The Saratogian* and Leonard (Pete) Harrell, press superintendent, Albany *Times-Union*.

Lower picture (seated): Frank McCue, general manager, *The Saratogian*; Earl (Steve) Nolta, head machinist, Schenectady *Gazette*; Walter E. Lewis, assistant composing room superintendent, Schenectady *Gazette*. (Standing): Henry R. Dahl and Frank Phillips, Teletypesetter Corporation; Frank Karl, Mergenthaler Linotype Co.; Oscar Kamb, composing room superintendent, Utica *Observer-Dispatch*.

Front Lockup —

How to be sure it is correct and how to get it on Intertypes

By WALTER SEVERIN*

**Assistant Manager, Intertype Corporation's Chicago Agency*

FRONT lockup on a linecomposing machine is quite simple. We'll show you by means of Fig. 1, just how the seven elements in a linecomposing machine must fit close together if a good front lockup is to be obtained.

What is Good Front Lockup?

On the linecomposing machine, a good front lockup means that the matrices and spacebands in a composed line when impressed against the front of the mold would make a good tight lockup or seal with the front of the mold, allowing no metal to escape. Since metal will escape through an opening of approx. 0.0015 in., it can be seen how important it is to maintain a good front lockup.

When metal builds up on the front of the mold cap or the mold body or the liners, that in itself will be an indication that metal is escaping between the mold and the matrices and spacebands, or the vise jaws, and that something should be done about it. While there is a front mold wiper on the machine to wipe off the very fine metal spray that will come through the matrices, spacebands and mold front, the mold wiper is not expected to remove anything more than that. Some of you may find metal buildup on the front of the mold caps, liners and bodies to a considerable degree.

In Fig. 1 is shown what may be called a perfect lockup. Notice how close the mouthpiece *B* fits against the back of the mold *C*. Now, the mold *C* should be perfectly straight. When it is, it makes a perfect contact with the left hand vise jaw, the right hand vise jaw and the matrices and spacebands. Next, these parts make perfectly tight contacts with the banking bar marked *E*. Next, notice that the banking bar *E* makes tight contact with the first elevator front jaw *F*. In turn, front jaw *F* is making perfect contact with the back of the vise cap *G*. All of these elements enter into what we call front lockup and when all actually make a tight seal with each other we have a perfect front lockup.

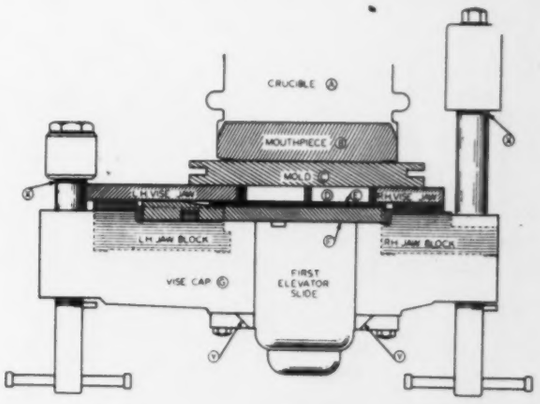


Fig. 1.—*In this partially cross-section diagram is shown vise, first elevator, mold and pot mouthpiece lockup in correct relation to each other.*

Warped Molds—Effect on Lockup

Now, there are many causes for interferences for good front lockup between the crucible *A* and the vise cap *G*. The most common cause is a warped mold. In Fig. 2 is shown what takes place when a mold warps. All molds can or do warp at some time or other during their lifetime. They usually warp forward at the center.

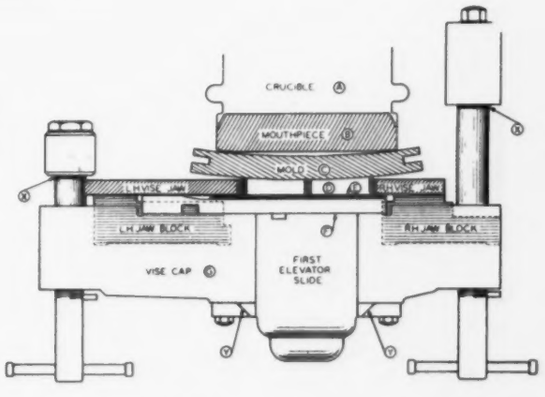


Fig. 2.—*In this diagram is shown the faulty lockup which exists when a mold is warped.*

In Fig. 2, the amount of warp has been greatly exaggerated to show what takes place. In actual practice this warpage does not amount to more than 0.001 in. or so. But since letter height accuracy is expected to be held to much less than that we naturally must hold the relationship of the elements much closer than is shown here. The fit of the mouthpiece *B* against the back of the mold *C* looks terrible, doesn't it? Yet the mouthpiece is perfectly straight and if the mold is warped it certainly cannot make contact in the center. How can we surface mouthpiece *B* to fit against the straight mold and then turn a warped mold up into position and expect the mouthpiece to adjust itself against the warped mold? It just isn't done. However, we are not talking about back lockup so let us discuss the front lockup.

Notice how the mold *C* in Fig 2 now bears tightly against the two matrices in the center of the mold but over on the left hand side notice how one matrix is up close to the mold while the other is up tight against the banking bar. The same

(*Continued on Page 84*)

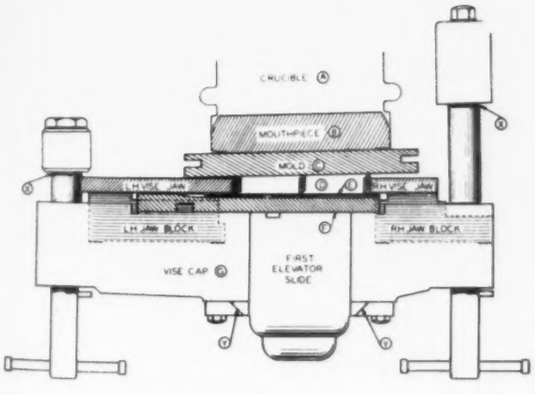


Fig. 3.—*This faulty lockup exists when the vise cap is not parallel with the mold and pot mouthpiece.*

Above, two Seybold Auto-Spacers are used as a team to cut gum wrappers. The lifts are stripped by the first machine, passed to the second for chopping. It amounts to an "assembly-line" operation.

is Seybold spacer is equipped with the popular Seybold "air-film" table. e heavy lifts of stock can be moved easily on a cushion of compressed air. ction is reduced as much as 85% for a lift of stock weighing 400 pounds.

Wrappers printed 24-up are cut quickly and cleanly. Once set for the cutting series, the Seybold spacer automatically positions the paper for every cut. The automatic back gauge does the heavy work.

A Mechanical Memory Positions the Pile

. . . the Result Is Profitable **MASS PRODUCTION**

"Mass production" is strong talk, but here's what a Seybold Auto-Spacer will do. On a multiple-cut job, it "memorizes" the cut sequence. The back gauge then moves into correct position for each cut automatically. It does this much faster than even a skilled operator can manage with an ordinary power back-gauge machine. And, being automatic, it eliminates the chance of human error from back-gauge positioning. The net result is a much higher rate of production, and less spoilage. That's a combination that means profit.

Profit for you?

With a long-run wrapper or label job, you can see how the mass production of a Seybold Auto-Spacer means money in the bank. But suppose you have a succession of short-run jobs. Then, you can set up each cutting sequence on a spacer bar (the mechanical memory). It's a quick adjustment. When the job changes, the operator turns the bar to the next setup and he's ready to cut. For "one-shot" cutting, the machine reverts to manual operation by the flick of a switch. Incidentally, if you handle big lifts of large sheets, you'll be interested in a spacer with the Seybold "air-film" table.

How much profit?

We can't say that a Seybold Auto-Spacer will do your work faster by 20%, 50%, or any specific amount. We don't know what kind of jobs you handle, or how. But we do know, from the experience of our customers, that a Seybold Auto-Spacer will pay for itself out of increased production. And all the other advantages also go into your ledger—in black ink.

We'll appreciate an opportunity to show you a Seybold at work. If this isn't convenient, please let us send you some literature on Seybold Auto-Spacers. Just check the size you're interested in and mail the coupon. Note: We're also ready with the facts on other Seybold bindery equipment. A check mark will bring you the information.

The design and manufacture of soundly engineered graphic arts equipment is the business of Harris-Seybold. Products of its divisions and subsidiaries include leading lines of equipment for all three major printing processes—letterpress, offset and gravure.

HARRIS-SEYBOLD COMPANY

fine graphic arts equipment . . . for everybody's profit

Harris Division • Seybold Division • Chemical Division • Special Products Division • The Cottrell Company • Macey Company • Harris-Seybold (Canada), Limited

This Seybold spacer is set to cut and trim calendar illustrations. Since positioning is automatic, there is no spoilage of costly 4-color sheets due to operator fatigue or error.

HARRIS-SEYBOLD COMPANY
4510 East 71st Street · Cleveland 5, Ohio

34"					
40"					
44"					
50"					
65"					
85"					
94"					

☐ CONTINUOUS EDGE TRIMMER

☐ MULTIPLE-SPINDLE PAPER-DRILLING MACHINE

Please send me more information
the Seybold cutter model (s) checke

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Company _____

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City _____ Zone

State _____

Research and Engineering Council Executive Committee Considers Its Constructive Program

At a one-day meeting held at Hotel Carter, Cleveland, on Thursday, February 10, the Executive Committee received reports of committee chairmen and exercised its coordinating prerogative concerning Council activities related to industry-wide objectives. The meeting was highly interesting and the members expressed satisfaction with the progress reports presented by committee chairmen.

In view of the proposed program for the year 1955 which will affect all segments of the industry, the need for increasing the Council's membership was obvious. The consensus of opinion was that it will be to everyone's personal advantage to build the Council bigger and stronger. *Printing Equipment Engineer* feels this can be done by helping add to Council resources by joining now and making it possible for the Council to continue the excellent progress it has been making and to achieve its high goals for 1955.

First copies of the Council's new quarterly publication *The R & E Coordinator*, were distributed at the meeting. *The Coordinator* is edited by the Council's Managing Director, Robert Rossell.

This publication is designed to establish a clearer and closer relationship between the officers and staff and the members they serve. Many members are prevented by distance or business pressure from making personal contacts and learning first hand the interesting facts of research and engineering and the impact both can have on the industry.

The following new members were announced in the *R & E Coordinator:* Balding & Mansell, Ltd., London, England; The Conway Printing Co., Inc., New York, N. Y.; Crescent Engraving Co., Kalamazoo, Mich.; Graphic Arts Research Foundation, Chicago; The Graphic Press, Inc., Raleigh, N. C.; Johnson, Inc., Printers, St. Louis, Mo.; Lanman Engraving Co., Washington, D. C.; Litho Chemical & Supply Co., Inc., Lynbrook, N. Y.; Charles T. Main, Inc., Boston; New York Life Insurance Co., New York, N. Y., and J. C. Valentine Co., New York, N. Y.

Some of those attending the meeting are shown in this picture.

Seated at the left table clockwise are: W. R. Spiller, vice president-engineering, Harris-Seybold Co.; Dwight Monaco, vice president, McGraw-Hill Pub. Co.; Paul Lyle, general manager, Western Printing & Litho. Co., Racine, Wis.; Felton Colwell, President, Colwell Press, Inc., Minneapolis, Minn.; R&EC Managing Director, Robert Rossell; Dr. Wm. C. Walker, National Printing Ink Research Institute, Bethlehem, Pa.: Alan S. Holliday, Craftsmen, Inc., Kutztown, Pa.; John S. Odell, Radio Corp. of America, Camden, N. J.; Wm. R. Maull, The Mead Corporation, Chillicothe, O.

Seated clockwise at the right hand table are: Wade E. Griswold, executive director, Lithographic Technical Foundation, New York, N. Y.; George C. Schaefer, jr., George C. Schaefer & Son, Los Angeles; Lee Augustine, vice president, Printing Machine Co., Cincinnati; Mrs. Helen Fisher, R&EC assistant secretary; Council Secretary J. Homer Winkler, Battelle Memorial Institute, Columbus, O.; William H. Wood, chief chemist, Harris-Seybold Co.; C. M. (Larry) Flint, Graphic Arts Director, Chas. T. Main, Inc., Boston; Sam Chernoble, president, The Comet Press, New York, N. Y.; Al Schloegel, executive secretary, Intl. Assoc. of Electrotypers and Stereotypers, Cleveland.

Standing, left to right: MacD. Sinclair, editor, *Printing Equipment Engineer*; Edward Busby, general manager, R. R. Donnelley & Sons Co., Chicago; Immediate Past Council President Edward J. Triebe, executive vice president, The Kingsport (Tenn.) Press; Clifford L. Jewett, Minnesota Mining & Mfg. Co., St. Paul, Minn.; R&E Council President John H. Davis, jr., executive vice president, Judd & Detweiler, Inc., Washington, D. C.; Morris Kantrowitz, technical director, U. S. Government Printing office, Washington, D. C.; Gordon H. Rohde, vice president in charge of manufacturing, The Reynolds & Reynolds Co., Dayton, O.; First R&E Council President Frank F. Pfeiffer, vice president and general manager, The Reynolds & Reynolds Co., Inc., Dayton, O.; Clem Mawicke, president, Pontiac Engraving & Electrotype Co., Chicago.

Executive committee members in attendance at the meeting but not present when this picture was taken were: R&EC Treasurer Joseph Schwartz, president, Wescott & Thomson, Inc., Philadelphia; Victor Strauss, Presentation Press, New York, N. Y.; G. L. Erikson, vice president, Braden Sutphin Ink Co., Cleveland.

Deviny Passes

John Joseph Deviny, 72, passed away on February 10. Deviny was an extremely popular and well known personage. His acquaintance with Graphic Arts people was nationwide. His career in Government service and in the Graphic Arts industry was long and illustrious.

From 1941 to 1948 he served as Deputy Public Printer under Augustus E. Giegengack. Upon the latter's retirement in 1948, he was appointed Public Printer by President Truman. He served until his retirement February 28, 1953. Deviny really was a career man in United States Government service. His activities were many. The honors bestowed upon him by appreciative people and organizations indicated his calibre.

Among members of the Intl. Assoc. of Printing House Craftsmen he was known as one of that organization's founders. He was the first treasurer in 1919 and served as president from 1922 to 1923, and from 1926 to 1927.

Deviny was a Roman Catholic by faith. He was a member of the bar of the Supreme Court and Court of Appeals, District of Columbia. He was the first person to have been in charge of production in both of the Government's two largest printing plants —the Bureau of Engraving and Printing and the Government Printing Office.

He is survived by his wife, one daughter, Katherine E. (Mrs. Louis G. Carrico), four grandchildren and two great grandchildren.

Static Control Adoption

The Hewson Co., Inc. recently announced that all Trailblazer presses (web fed, sheet delivery offset), manufactured by John Waldron Co., will be equipped with its system of TAKK High Speed Static Controls.

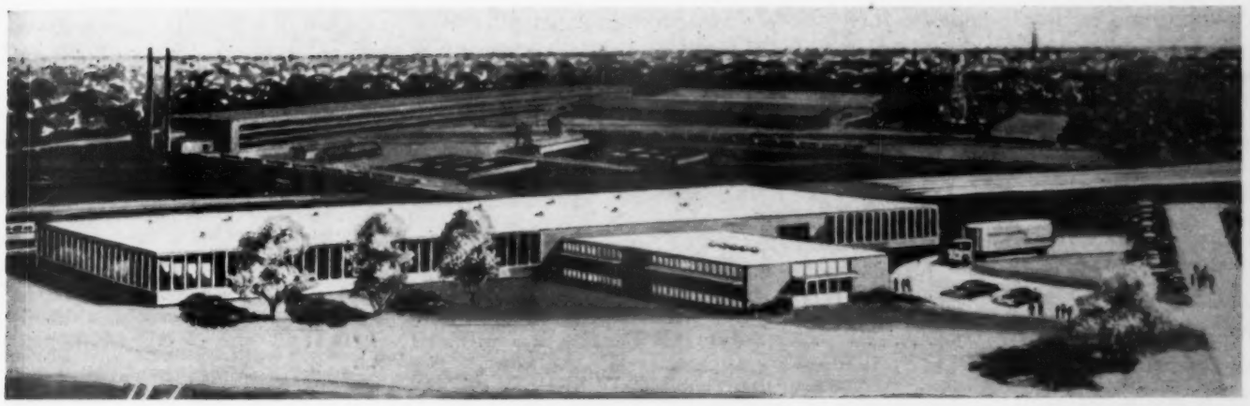
PRINTING EQUIPMENT *Engineer*

Presents illustrated descriptions of

30 New Plants

This presentation is comprised of commercial, publication, newspaper, book and platemaking plants which have been built recently, are now in process of construction or will be erected soon.

We regret it is not possible to publish all plant data sent to us. However, those not presented here will appear in early issues of **Printing Equipment Engineer.**

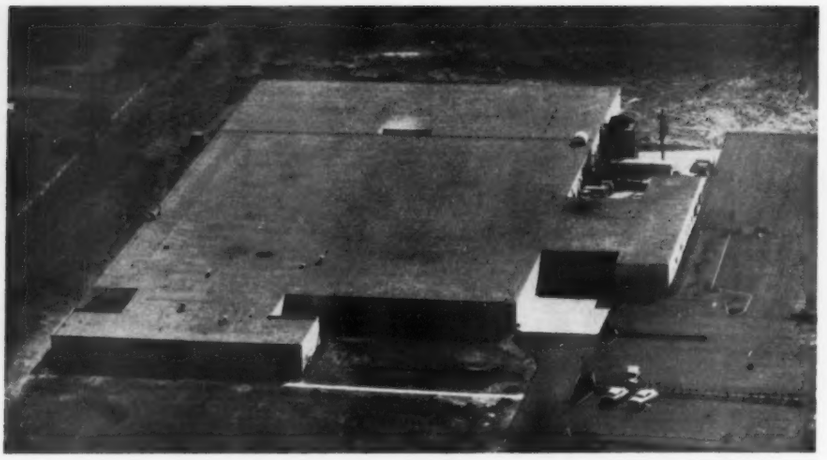


The William Feather Co., Cleveland, Ohio

The operations of the William Feather Co., Cleveland commercial printers, presently in five locations, will soon be consolidated under one roof in an estimated $525 thousand building (shown above). The new structure, which is currently under construction, is located approx. 5 mi. from the center of Cleveland on a 5½ A. site.

The front of the plant will have a southern exposure. The office wing is in the foreground. The production departments forming the main section of the building will be located back of the office wing. Architects for the project are Dalton-Dalton Associates, Cleveland. Engineering consultant is Olin E. Freedman, Chicago. The plant will operate entirely on one floor in 60,000 sq. ft. of floor space. The building will be of cement block and brick construction. Included are wood floors in the work areas and fluorescent lighting throughout the plant. Access to railroad facilities and a sheltered shipping and receiving dock will be other features of the plant.

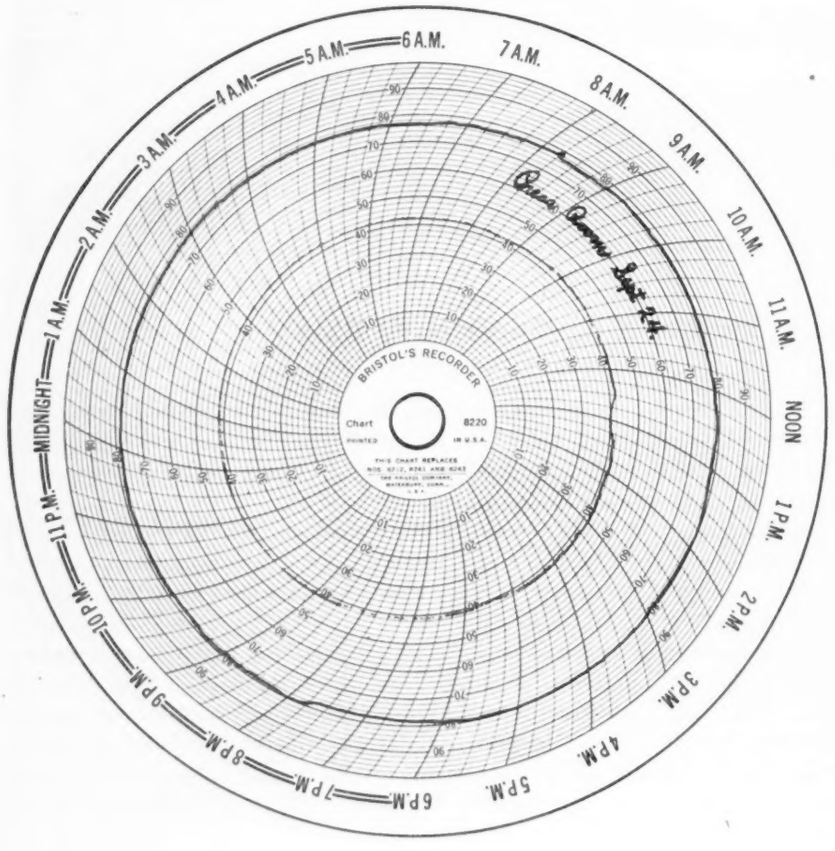
Movement of equipment into the new building from Feather's downtown locations will begin sometime this summer. It is expected that the entire move will be completed by the end of this year. Some new equipment is scheduled for installation in the new quarters before older equipment, which it replaces, is disposed of. According to William Feather, jr., general manager of the company, production will not be hampered during the moving operation. The firm plans to maintain a message center at its present location in Cleveland to service downtown customers.



Progress Lithographing Co.
Cincinnati, O.

The Progress Lithographing Co., Cincinnati, O., has established a reputation for aggressiveness in promoting the use of color in printing. The firm has steadily progressed toward providing well engineered methods and modern equipment for producing printed color by the quickest means. Recently, it appeared that Progress had reached its projected goal when it swung into full production in an air conditioned $2½ million offset printing plant. The company now occupies its new home in suburban Amberley Village. The one story plant, constructed on a 12 A. plot of land, provides 90,000 sq. ft. of floor space.

According to Charles H. Klein, president of the company, 95% of its production is color work. For this reason, Progress operates on the basis of running the complete job once through the press wherever possible. The plant is equipped with one-color, two-color, four-color and five-color presses. Multiple color



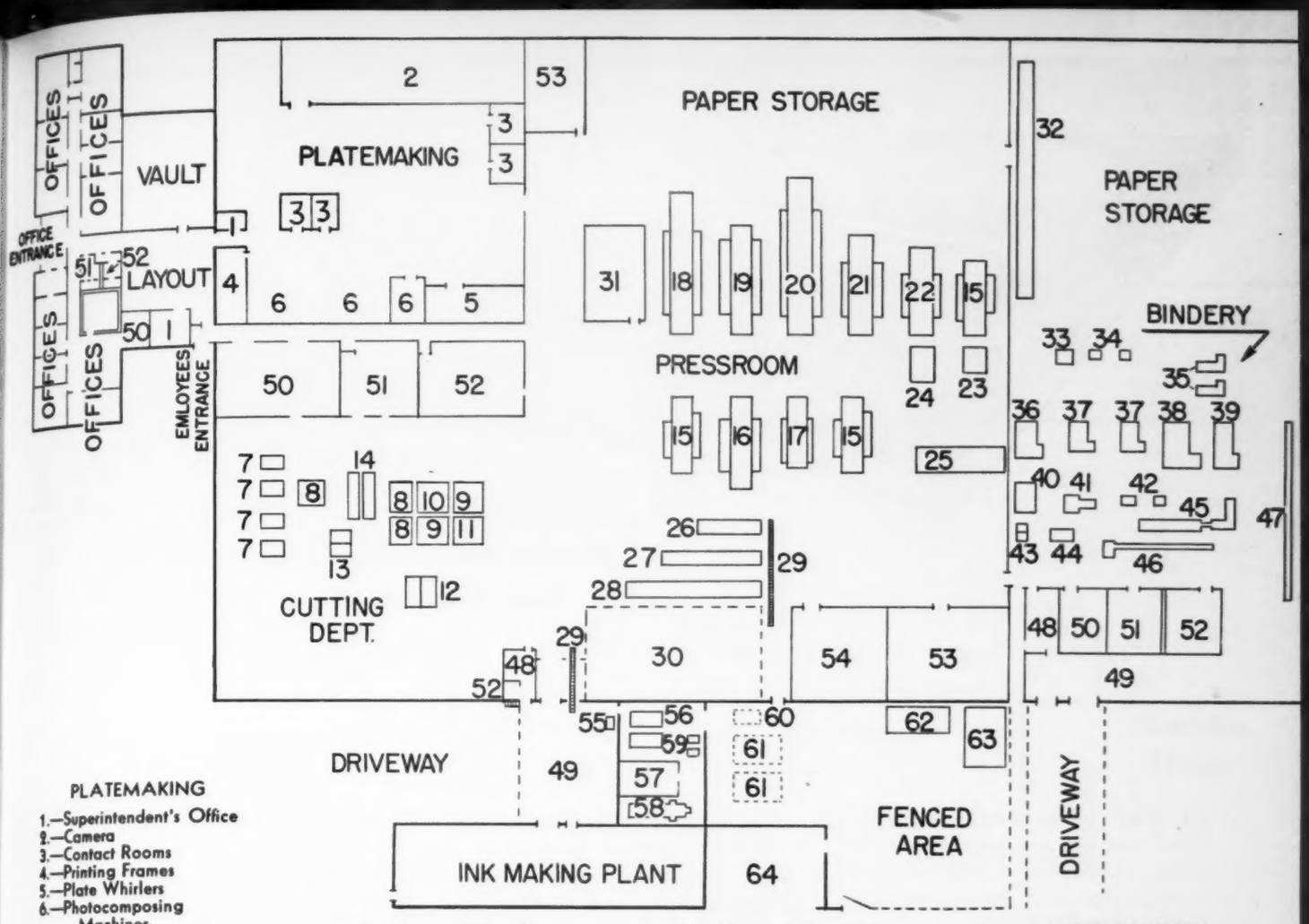
Temperature and humidity in the production departments and offices of the Progress Lithographing Co., Cincinnati, are under the constant control of three instruments in different locations within the plant. Known as Bristol recording instruments, one each has been installed in the platemaking department, pressroom and bindery. The master control instrument is located at the source of the air conditioning installation.

On an 8 in. circular paper chart (shown at left) the recorders trace the temperature and relative humidity readings for a particular department over a 24 hr. period. The outer irregular tracing within the chart designates the temperature in red ink. This particular example shows close adherence to the desired 78 to 80 deg. F. for summer operation. The inner irregular recording is marked in blue ink and indicates the humidity percentage.

In the winter, the system is regulated to maintain a 76 to 78 deg. F. temperature. Relative humidity throughout the year is held at 40%. A single system at Progress combines the air conditioning, humidity control and heating operations.

Erratic fluctuations of the temperature and humidity marking needles, as seen here, are caused by a variety of circumstances. Some of these result from a change in shifts, doors being opened, employees leaving the room during lunch hours and, rarely, mechanical troubles with the system.

The recording charts are filed by Progress for possible future reference as to the temperature and humidity in a given department on certain days. Such a procedure enables the company to watch for register imperfections in work which was run on a day when control of temperature and humidity variables were erratic.



PLATEMAKING

1.—Superintendent's Office
2.—Camera
3.—Contact Rooms
4.—Printing Frames
5.—Plate Whirlers
6.—Photocomposing Machines

CUTTING DEPT.

7.—Automatic Die Cutters
8.—45 in. Paper Cutters
9.—64 in. Paper Cutters
10.—85 in. Paper Cutter
11.—Quadtrimmer
12.—Jogging Machines
13.—Die Cutters
14.—Roller Embossers

PRESSROOM

15.—42 in. by 58 in. Single Color Offset Press
16.—42 in. by 58 in. Two-Color Offset Press
18.—52 in. by 76 in. Four-Color Offset Press
19.—42 in. by 58 in. Four-Color Offset Press
20.—52 in. by 76 in. Five-Color Offset Press
21.—52 in. by 76 in. Two-Color Offset Press
22.—52 in. by 76 in. Single Color Offset Press
23.—58 in. Bronzing Machine
24.—76 in. Bronzing Machine
25.—Embossing Presses
26.—22½ in. by 35 in. Offset Perfecting Press
27.—18 in. by 22½ in. Four-Color Web Offset Press
28.—32 in. by 40 in. Four-Color Web Offset Press
29.—Paper Roll Floor Conveyors
30.—Paper Roll Storage Pit
31.—Press Roller Storage

BINDERY

32.—Varnishing Machine
33.—Slitter and Rewinder
34.—Special Rolling Machines
35.—14 in. by 20 in. Folding Machines
36.—25 in. by 38 in. Folding Machine
37.—22 in. by 28 in. Folding Machines
38.—Folding Machine
39.—31 in. by 46 in. Folding Machine
40.—50 in. Paper Cutter
41.—Bracket Trimmer
42.—Singlehead Stitching Machines
43.—Paper Drillers
44.—Jogging Machine
45.—Automatic Inserter, Stitcher and Trimmer
46.—Nine Station Stitcher
47.—Conveyor Belt Table

MISCELLANEOUS

48.—Shipping Offices
49.—Shipping Docks
50.—Lunchrooms
51.—Women's Lavatory
52.—Men's Lavatory
53.—Air Conditioning Equipment
54.—Machine Shop
55.—Paper Baler
56.—Boiler Room
57.—Plate Graining Room
58.—Diesel Power Plant
59.—Air Compressors
60.—Underground Solvent Storage Tank
61.—Underground Oil Storage
62.—Electric Sub Station
63.—Cooling Tower for Air Conditioning System
64.—Garage

work is assigned to the press equipped with the corresponding number of printing units. The obvious reason is that it eliminates considerable sheet handling and forestalls the possibility of dimensional change in the stock affecting register on those jobs which must be run through the press again.

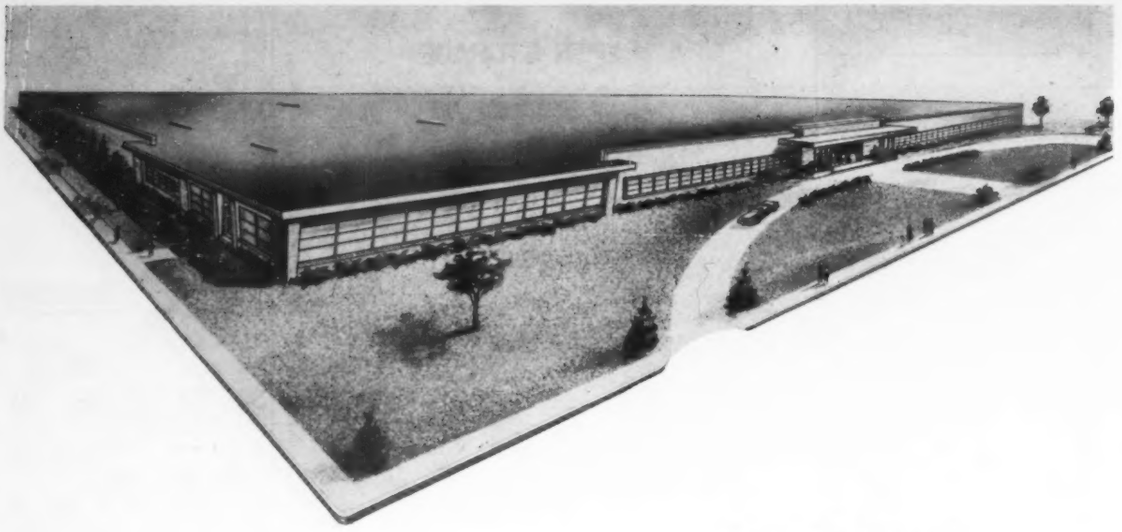
The Progress company prints attractive advertising pieces, window and counter card displays, mailing pieces, package inserts, labels, gift wraps, greeting cards and similar products where color is a predominant feature.

Besides the need for expanded quarters, the company wanted a structure suitable for economical control of both temperatures and humidity. It was discovered that air conditioning the old plant was impractical.

Planning the new plant took place over a period of several years before actual construction started. Much like other companies, the task of locating equipment within the different production departments was performed under the direction of the firm's executives. This careful engineering resulted in continuance of production during the moving operation.

The movement of equipment and material from the old plant into the new one took place over a period of six months. Working from floor plan drawings, it was possible to bring each machine, cabinet and table to its proper location as soon as it was moved into the building. Production commenced at the new site upon completion of construction. This was accomplished by the installation of a new four-color press, plate coating machine and photo-composing

(Continued on Page 72)



Magill-Weinsheimer Co.
Lincolnwood, Ill.

Magill - Weinsheimer Company's building which is nearing completion in Lincolnwood, a suburb North of Chicago, is a one-story structure containing 130,000 sq. ft. of floor space. The firm prints by letterpress and offset processes. Erected on a 7 A. tract of land the building frontage is 362 ft. facing Touhy Ave. with a depth of 348 ft. For landscaping purposes the building was set back 60 ft. from its normal building line. It will be ready for occupancy about May 1.

The firm's new location is about 16 mi. Northwest of its present location at 1322 So. Wabash Ave. in a 10 story building recently sold by the company.

To the West of the new building, parking space is provided on company property for 200 automobiles of customers and employees. To the South, 2 A. of land have been reserved for employee recreational purposes.

Cost of the project with new equipment to be installed will represent an investment of an additional $2 million, plus present equipment to be moved to the new location.

Removal of equipment from the firm's present location to the new plant will be done gradually to lessen interference with production schedules for covering a variety of advertising literature, point-of-sale posters, display sales aids, and die-cut devices.

Considerable Yearly Saving

Preliminary survey done on an engineering basis, prior to buying the site for the new development, revealed the interesting fact that a considerable saving could be effected by operating a one-story structure with an orderly layout in comparison to costs of production in the present 10 story outmoded building.

Why Move To Outskirts?

In addition, savings can be derived because of accessibility of delivery trucks to loading and unloading platforms or docks provided by modern engineering. One reason for the trend for printing plants and other factories to move to Chicago's outskirts is to avoid the costly delays occasioned because of congested narrow alleys in downtown areas which cause overland auto trucks and other vehicles to wait for hours to reach receiving and shipping docks built long ago for horse and wagon facilities.

Increased Production Speed

Monetary savings plus increased speed in production convinced the management that a one-story building with plenty of space for possible future expansion was desirable. The survey was made under the supervision of Z. Wayne Adams, chairman of the executive committee of the firm, who assigned the company's director of engineering and maintenance, John B. Kruft, to do the technical work.

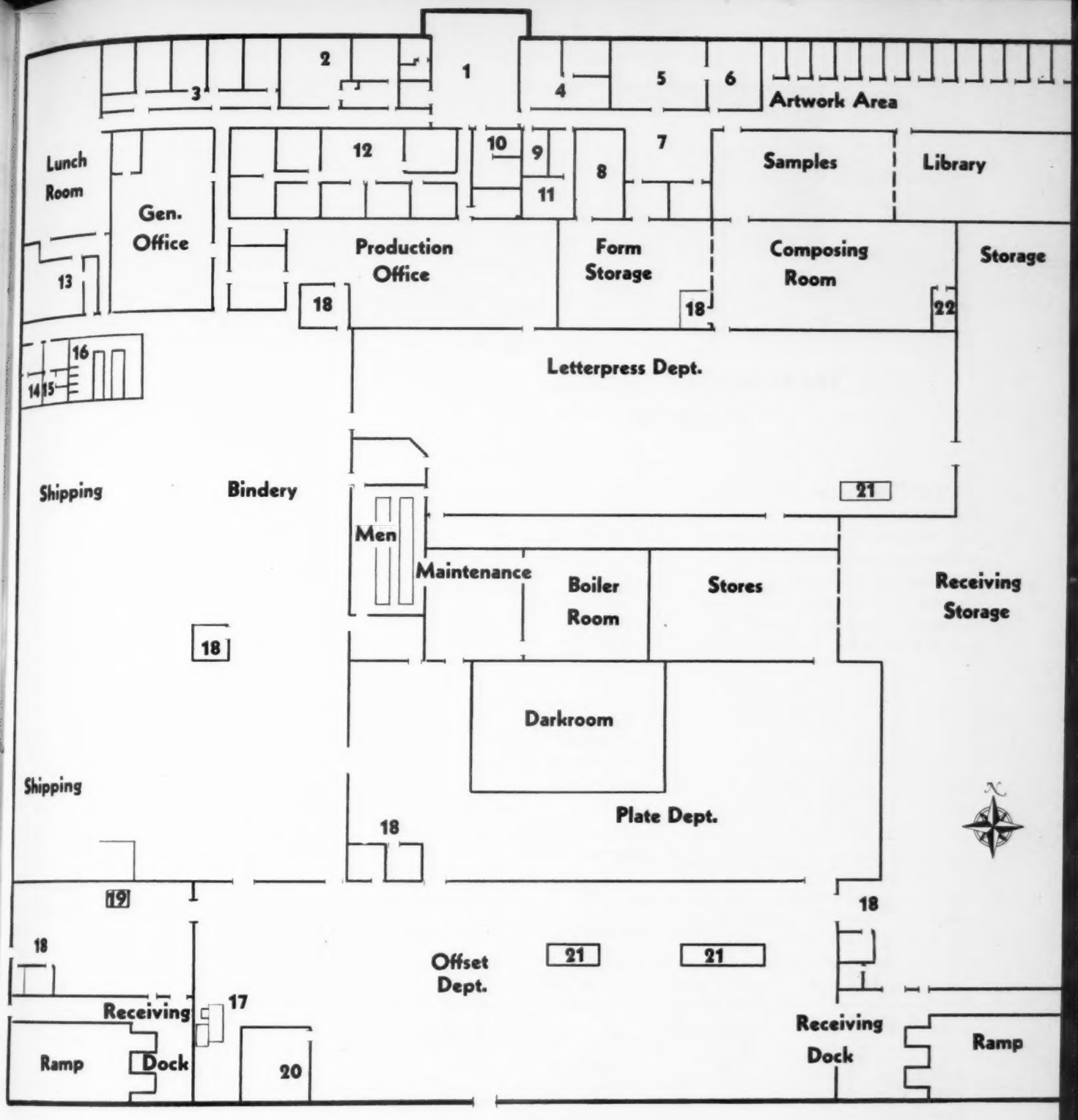
Visited Other Plants

The search for a site that would meet all requirements of the management required visiting 62 proposed places. Mechanical plants of printers and newspaper publishers in numerous cities besides Chicago were also visited for ideas. Residence of employees and transportation facilities were considered. All of this preliminary work resulted in the purchase of 19 A. of farm land, 12 A. of which were sold to sub-dividers and 7 A. retained for erection of the plant and associated activities.

Built New Street

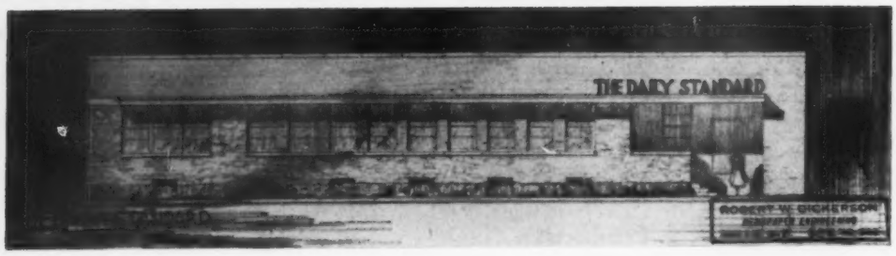
Architectural plans called for a 36 ft. wide street to the East of the

(Continued on Page 80)



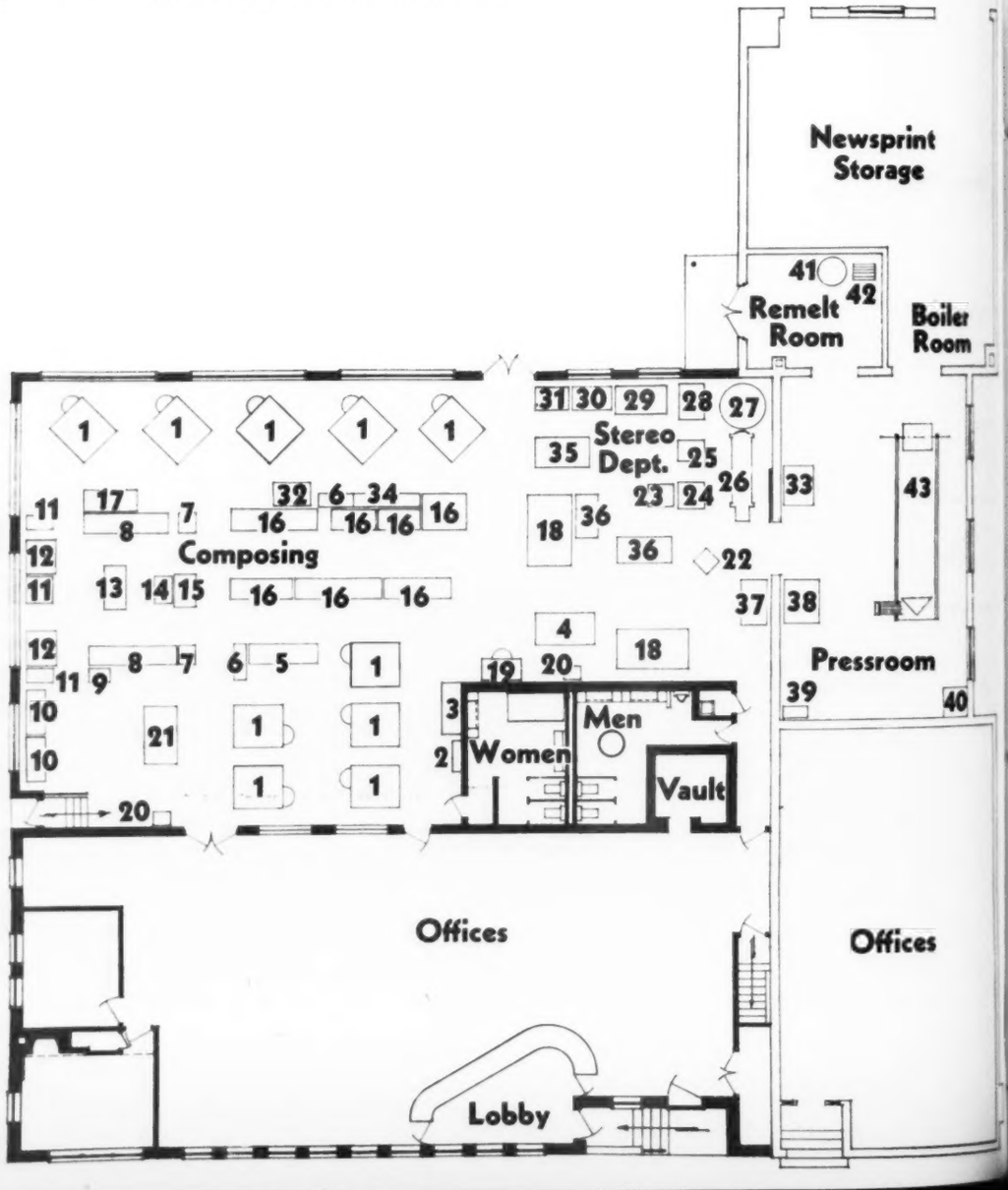
Floor Plan Layout of Magill-Weinsheimer's Plant

1.—Entrance
2.—Conference room and executive office
3.—Sales offices
4.—Sales offices
5.—Art Display
6.—Art Conference
7.—General art office
8.—Office electric equipment
9.—Ladies' rest room
10.—Purchasing
11.—Telephone equipment
12.—General sales
13.—Kitchen
14.—Personnel
15.—First aid
16.—Ladies' rest room
17.—40 T. air compressor
18.—Supervisor's offices
19.—Scale pit
20.—Quality control
21.—Press pits
22.—Proofreaders



The Standard Printing Co.
Celina, O.

In 1955, The Standard Printing Co., Celina, O., will occupy a new building designed for both commercial and newspaper printing operations. The building has been constructed of steel and masonry. Robert W. Dickerson, Cleveland, was the architect and engineer. Flooring in the mechanical departments is dustless cement. Asphalt tile is used on the floors of the office areas. The entire building has been fitted with acoustical ceilings and fluorescent lighting. Front of the structure (shown in the architect's sketch above) is of Tennessee Quartzite stone and buff brick.



1.—Linecasting Machines
2.—Parts Cabinet
3.—Machinist's Bench
4.—Page Proof Press
5.—News Dump
6.—Proof Press
7.—Saws
8.—Ad Makeup Tables
9.—Ad Copy Desk
10.—Elrod Material Maker
11.—Ludlow Matrix Cabinet
12.—Ludlow Machine
13.—Small Proof Press
14.—Miterer
15.—Cut Dump
16.—Makeup Tables
17.—Ad Dump
18.—Mat Roller
19.—Foreman's Desk
20.—Drinking Fountains
21.—Page Storage
22.—Chipping Block
23.—Flat Scorcher
24.—Sta-Hi Machine
25.—5 Col. Casting Box
26.—Pony Autoplate
27.—Stereo Furnace
28.—Page Casting Box
29.—Stereotype Saw
30.—Saw
31.—Router
32.—Magazine Rack
33.—Plate Cutter
34.—Reynolds Copy Dump
35.—Flat Shaver
36.—Bench
37.—Curved Router
38.—C&P Platen Press
39.—Air Compressor
40.—Press Control Panel
41.—Remelting Furnace
42.—Pig Mold
43.—Goss Duplex Press

Alco-Gravure
Div. of Publication Corp.
Los Angeles

A new rotogravure printing plant (shown above) was recently completed on the West Coast by Alco-Gravure, Div. of Publication Corp. Its location in Los Angeles provides access to a 500 ft. railroad siding and is convenient to north, south and east highways for shipping by truck. It is also situated less than a mile north of the Los Angeles Municipal Airport.

The one-story building is constructed of concrete panel walls and a steel roof. Total floor space is approx. 40,000 sq. ft. Fluorescent lighting and concrete floors are other features of the building.

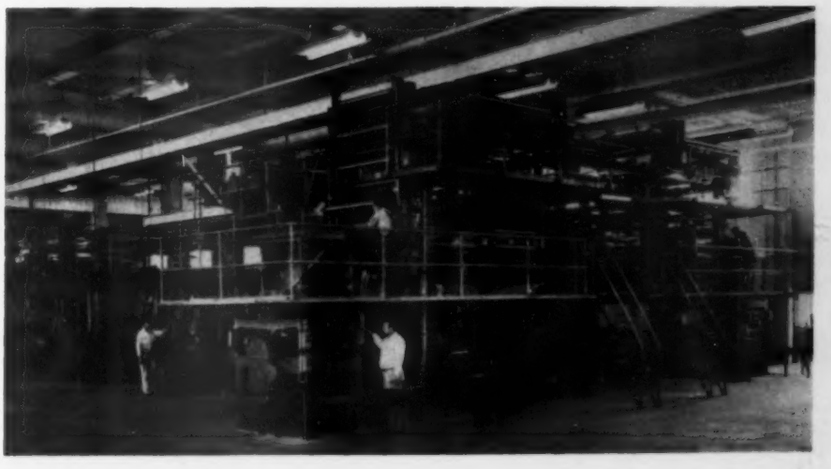
23 ft. Ceiling

Fuel and solvent storage tanks are designed so that they may be filled from either railroad or truck tank cars. A ceiling height of 23 ft. has been provided for both the paper storage area and pressroom. Shown at right is the company's Goss multicolor rotogravure press.

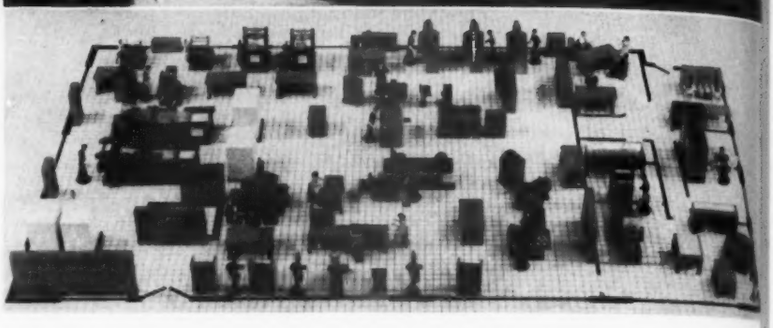
Paper rolls are handled by battery-operated lift trucks and stacked three and four high for storage. The building has been constructed to allow for expansion both north and south. Separate docks have been provided for roll paper receiving, shipment of waste, receipt of materials other than paper and shipment of printed matter.

The firm's Etching Dept. is air conditioned. Employee safety and pleasant surroundings were among the considerations during planning. Parking facilities for employees and customers are available.

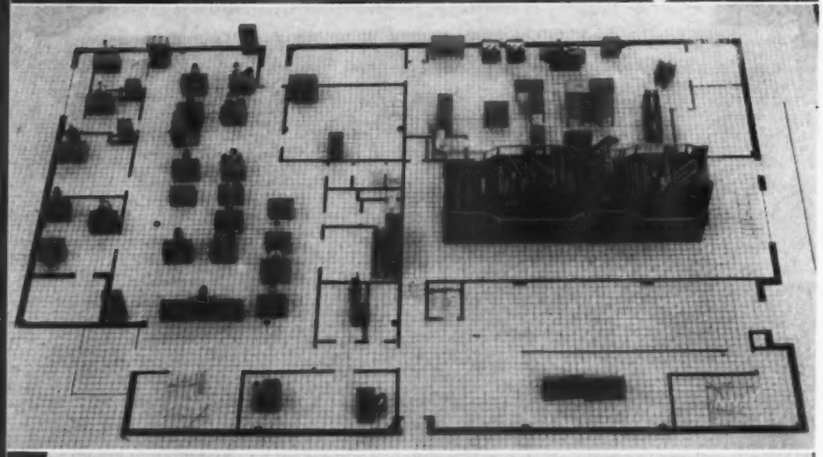
Alco-Gravure prints **This Week**, a Sunday magazine section which has a circulation of nearly 11 million copies in 34 newspapers. The Los Angeles plant produces 1,800,000 copies of this total. Also printed in the plant are the New York **Times** magazine section, New York **Times** book review section, signatures of **Look** magazine, booklets, catalogs, calendars and other kinds of commercial printing. The plant is designed for large volume printing.

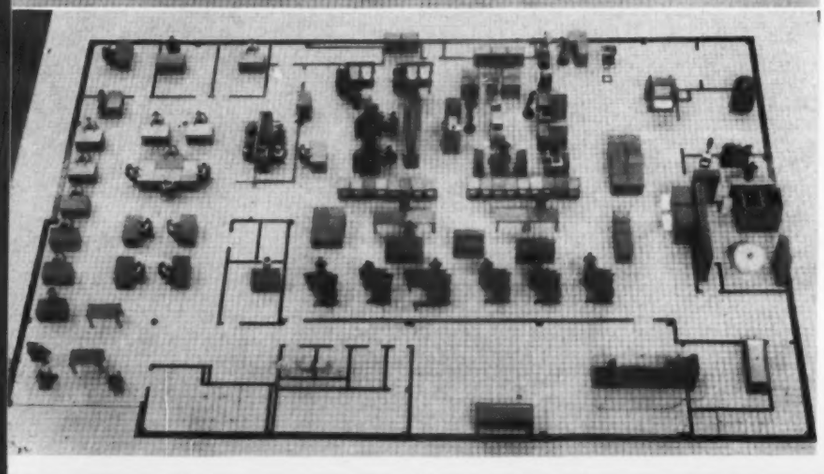


Gordon Printing and Lithographing Co. →
Davenport, Ia.



The Gordon Printing and Lithographing Co. is now in operation in its $100 thousand combination letterpress-offset printing plant in Davenport, Ia. The new quarters (upper right) provides 6500 sq. ft. of floor space. The production departments have been fitted with fluorescent lighting and cement floors with scatter mats. Equipment layout in the plant by Paul J. Ocken, vice president and general manager, Graphic Arts Industry, Inc., Minneapolis, Minn. Dimensional scale models of equipment were used in the planning (lower right). In describing this operation, Ocken states "all the pieces of equipment were laid out first, and then a building and partitions were built around them." By studying the floor plan it can be seen that the composing room and offset platemaking department are located toward the front of the building near the offices. Work flows through the letterpress and offset pressrooms toward the bindery (lower left side) at the rear of the plant.

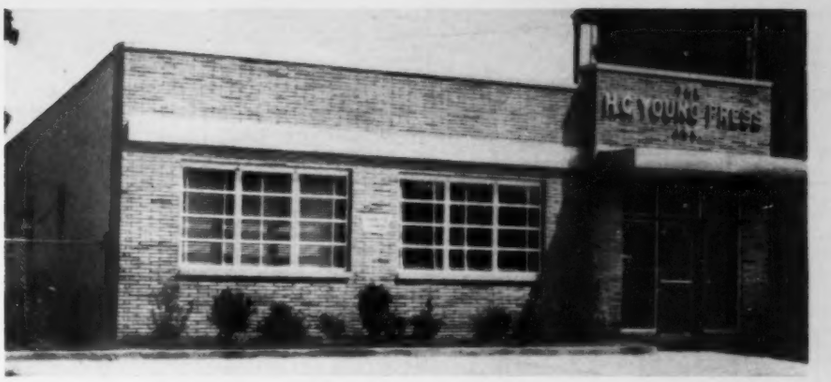




← Rochester (Minn.) Post-Bulletin

Construction is now under way on a new home of modern design (upper left) for the Rochester (Minn.) **Post-Bulletin.** The $550 thousand project will provide this daily newspaper with 30,000 sq. ft. of floor space. Equipment layout by Paul J. Ocken, vice president and general manager, Graphic Arts Industry, Inc., Minneapolis, Minn. Architects were Ellerbe & Co., St. Paul, Minn. This is another example of a plant where dimensional scale models of equipment were employed in its planning. The ground floor (middle left) will accommodate the stereotype department, pressroom, mailroom, advertising and business offices. The second floor (lower left) will house the composing room, engraving department and editorial offices. The basement is to be used for paper roll storage and the reel room. Gummed tape is used on the ruled paper to show the dimensions of the building as well as the size of each individual room and department.

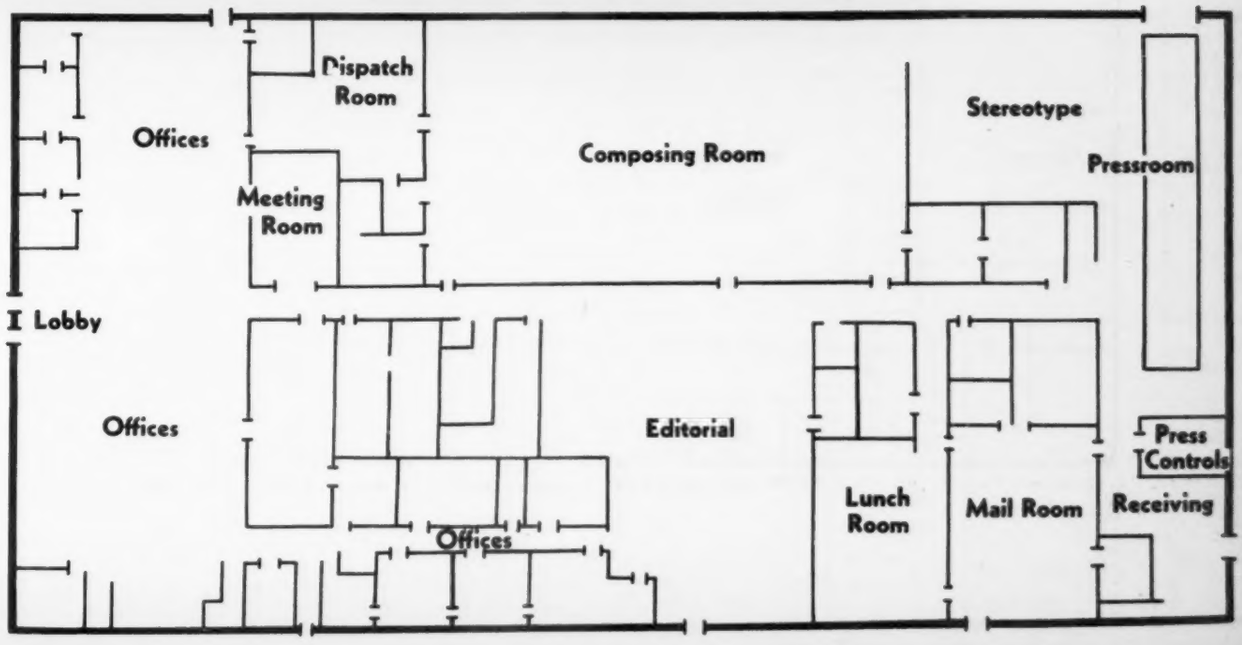
The H. C. Young Press
Norfolk, Va.

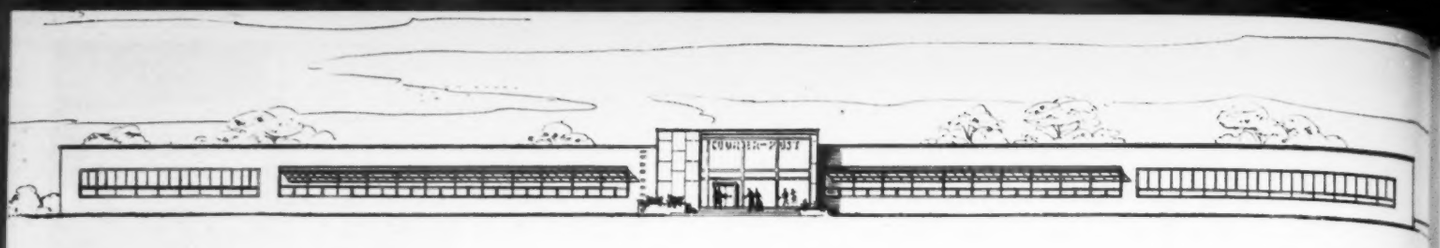


The attractive looking building at right is the new home of the H. C. Young Press, Inc., Norfolk, Va., commercial printers. In the 40 ft. by 100 ft. structure is provided 2000 sq. ft. more floor area over Young's previous location. The plant has been set up for straight line operation. Starting with the composing room to the left of the front office, work moves across to the pressroom on the right side of the building and then into the bindery. Shipping department is located at the rear. Walls in the mechanical departments are painted white with a gray wainscoating. In addition to fluorescent lighting, ceilings are painted aluminum to reflect more light into the working areas. A 40 in. exhaust fan provides ventilation. Suspended heating units are used to save floor space.

Riverside (Calif.) Press-Enterprise

The 45,000 sq. ft. building shown below in the architect's sketch and floor plan is being constructed for the Riverside (Calif.) **Daily Press** and **Enterprise.** Its location outside the downtown area represents another move in the Graphic Arts toward decentralization from the close confines of a city. Architect for the project is Herman Ruhnau, A.T.A., of Riverside. The entire structure will be air conditioned. Basically a one story with basement building, a second story unit will be used for mailing operations. A new press being installed will permit running a 48 page paper at 40,000 copies per hr. or a 96 page paper at 20,000 copies per hr. A landscaped parking area is to be used by both employees and customers.





Camden (N. J.) Courier-Post

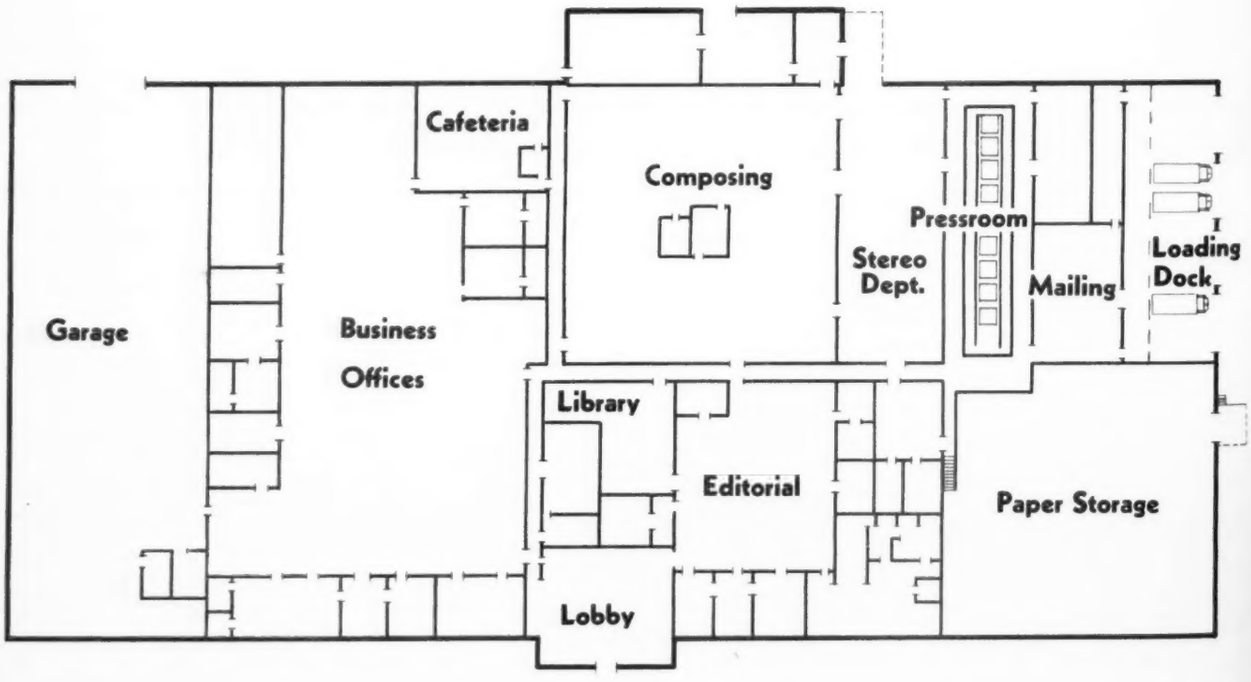
The $1 million building shown in the artist's sketch above is being constructed by the Camden (N. J.) **Courier-Post** on a 16 A. plot of ground located about 3 mi. from Camden's City Hall. The one-story structure, situated in suburban surroundings, is scheduled for completion by mid-summer of this year.

The main building will measure 377 ft. long by 160 ft. deep. Attached will be rooms for housing air conditioning equipment, a boiler room and mechanical services room. Overall floor space including the reel room will be 66,000 sq. ft. The completed project, including equipment, will represent an expenditure of less than $2 million.

Facilities for storing in excess of 1000 T. of newsprint are included in the plans. A garage large enough for accommodating up to 48 cars and trucks will be located at one end of the building (see floor plan below). A spacious parking area is being provided for employees and customers.

A Goss Headliner press consisting of eight units and one double folder is to be installed. The press will be equipped with reels, tensions, pasters and Cutler-Hammer drive. New composing room equipment will include a Model F Intertype Mixer linecasting machine, saws, cabinets and other fixtures. A mechanized mailing room is being planned.

The building was designed by Louis T. Klauder & Associates, Philadelphia, under the direction of William A. Stretch, general manager, and Neal E. Dyer, business manager, both of the **Courier-Post.** Layout of the composing room by A. C. Arnesen of American Type Founders.



Gile Letter Service
Minneapolis, Minn.

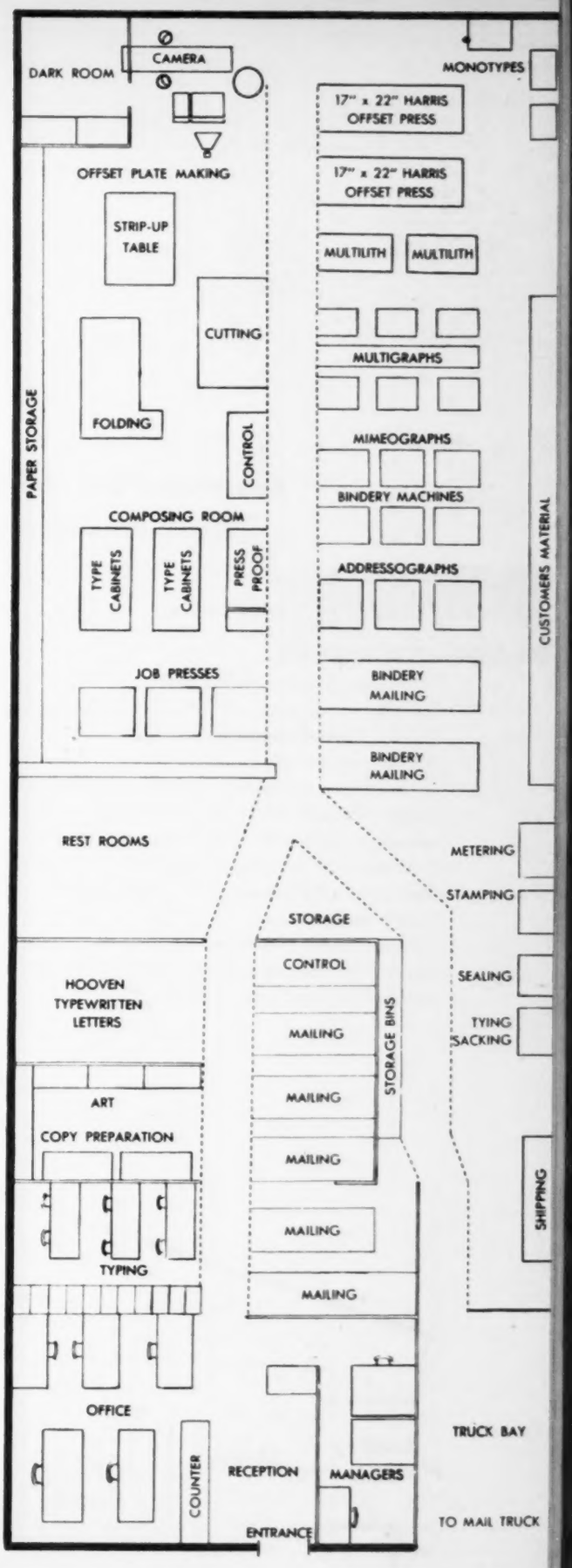
A recent move was made in Minneapolis, Minn., by Gile Letter Service to a downtown ground floor location which provides this combination letterpress-offset printing plant with 6500 sq. ft. of floor space. The Gile firm makes a specialty of direct mail advertising production which includes all types of mailing pieces from postcards and letters to more elaborate folders and catalogs.

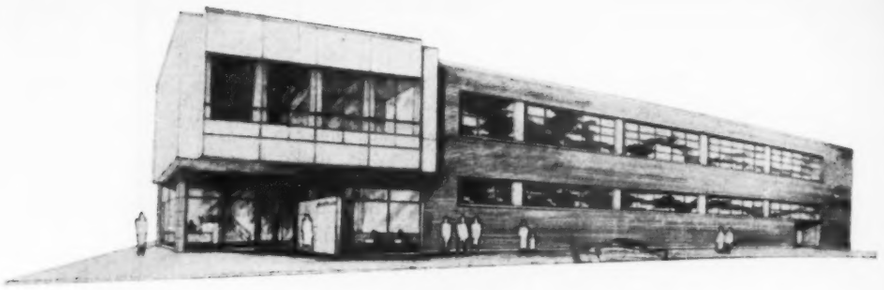
Working areas in the Gile plant are provided with asphalt tile covered floors. Fluorescent lighting has been installed throughout the building. Adequate ventilation is provided from three sides of the building which face either the street or driveways.

Gile operates a well-equipped photo offset department (see floor plan layout at right) which includes two 17 in. by 22 in. Harris offset presses and several Multilith machines. A battery of 10 Multigraphs and several Mimeographs are also included in this equipment. Letterpress printing is produced on a Kluge and two other job presses.

Production workflow starts from the left front side of the building where the art department is located and moves toward the rear of the plant. It then flows back along the right side of the building into the bindery, mailing and shipping departments.

Gathering machines, folders, sealing machines, postage meters, tying machines and addressing machines are included in the equipment for automatically performing many of the necessary operations in the Gile firm. Two truck entrances are provided (at front and side) for efficiently handling the shipment of material.





Benton Harbor (Mich.) News-Palladium

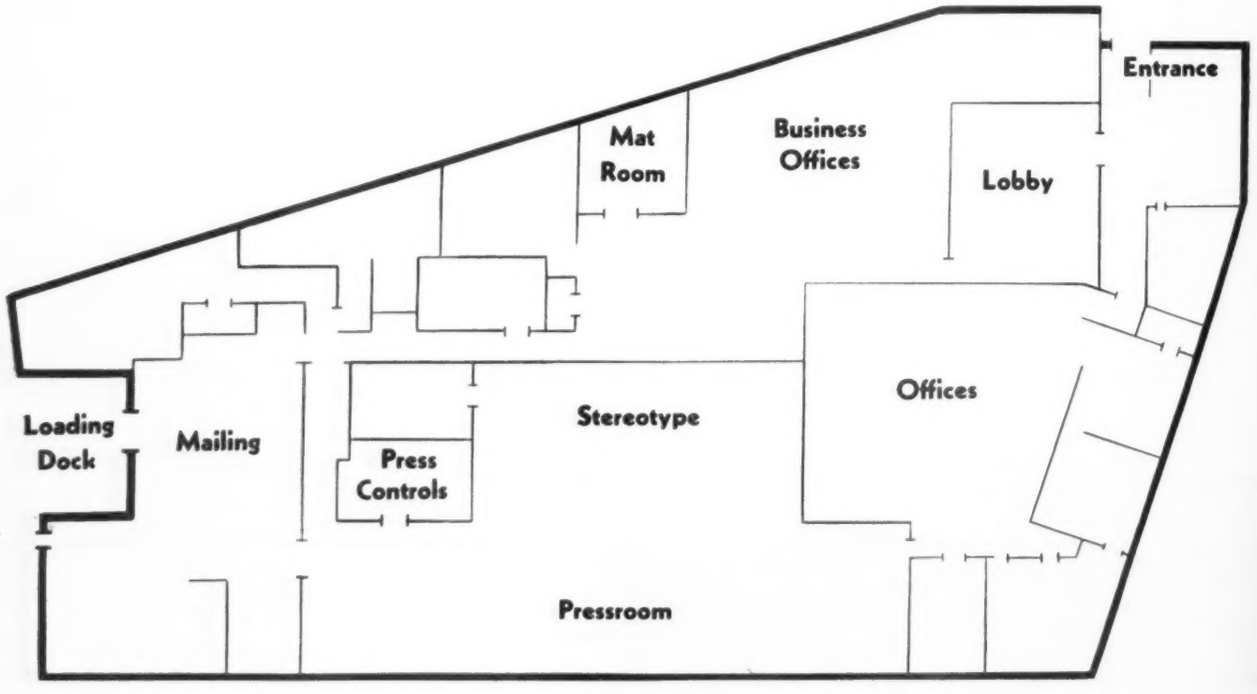
A new $700 thousand publishing plant is scheduled for mid-summer operation this year by the Benton Harbor (Mich.) **News-Palladium.** Designed with two stories and a full basement, the building will provide over 32,000 sq. ft. of floor space and somewhat resembles a trapezoid shape. This design is intended to provide a maximum amount of light and ventilation.

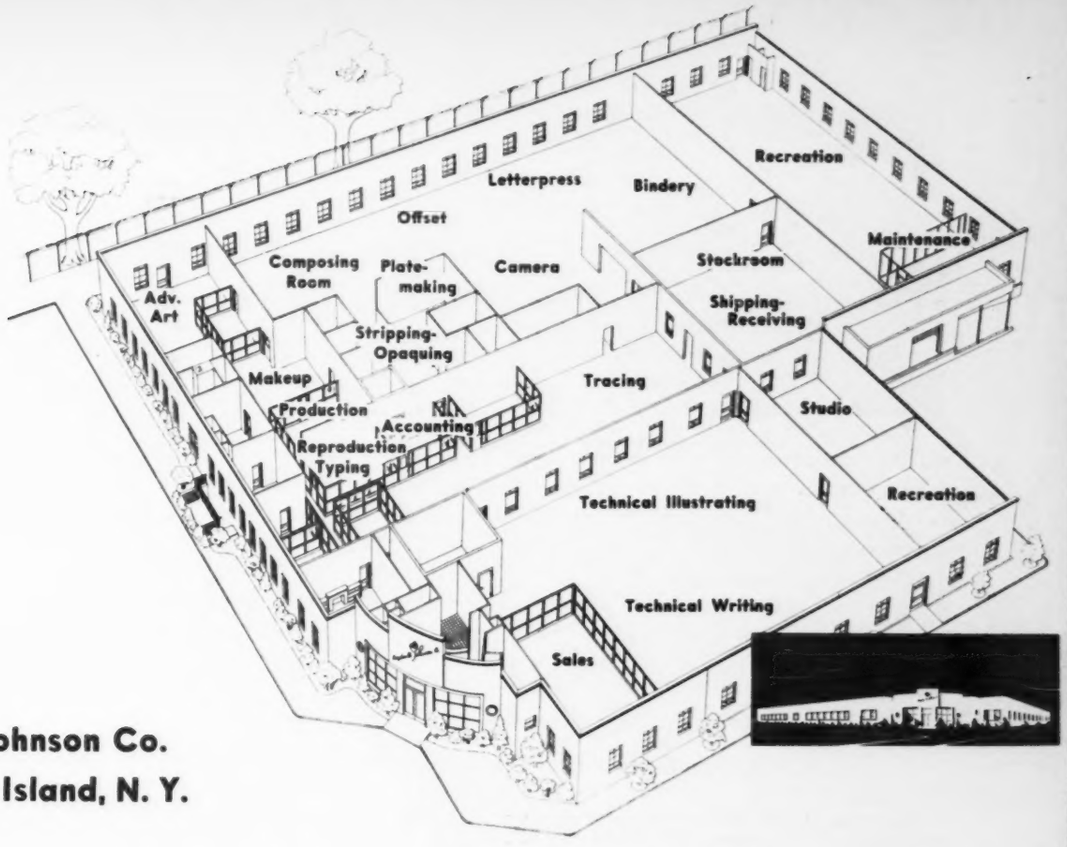
Architects for the project are Louis Kingscott and Associates, Kalamazoo, Mich. Sketch of the building is shown above.

The basement will be used mainly for paper roll and ink storage. Included in the first floor plan shown below will be located some mechanical as well as business, advertising and circulation offices. The composing room and editorial department will be located on the second floor.

Fluorescent lighting will be used throughout the building. Flooring in the composing room and pressroom will be ½ in. maroon Carey asphalt tile. Fin type radiation will be included as part of the heating system.

A new 40 page Goss Universal press is to be installed in the new plant. It will be equipped with Cutler-Hammer press drives and controls. The five unit press together with color equipment will be designed for printing three colors and black, and the rated speed is 33,000 copies per hr.



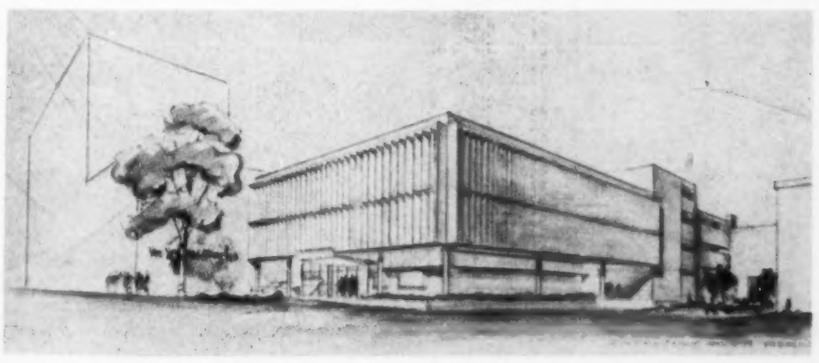


Corydon M. Johnson Co.
Bethpage, Long Island, N. Y.

Occupancy recently occurred of a 13,000 sq. ft. addition to the building of Corydon M. Johnson Co., Inc., Bethpage, Long Island, N. Y. This expansion brings the floor area total to 39,000 sq. ft. The Johnson company specializes in the production of technical handbooks, brochures, direct mail pieces and similar items. In the new wing will be provided facilities for 90 of the firm's 240 employees. Inset above shows a frontal view of the building. Air conditioning, fluorescent lighting and cement floors covered with Masterpave are features of the plant. The addition to the Johnson plant is intended to provide space for an elaborate recreation room, motion picture studio and an office for the president and founder of the firm, Corydon M. Johnson.

Raleigh (N. C.) News and Observer

A $550 thousand three story building addition is now under construction in Raleigh, N. C. for the **News** and **Observer.** Air conditioned and fire-proofed throughout, the building will be of steel and reinforced concrete construction with light colored brick facing for the exterior. Architects are Deitrick-Knight & Associates, Raleigh, N. Y.



The new addition will be used mainly for office space. Mechanical departments will remain housed in an attached L-shaped building (see architect's drawing at left). A distinctive feature of the building will be the glass and aluminum trim with showing columns covered with Monometal. Southern and western sides of the structure will be protected from the sun by aluminum vertical sun control louvres. Behind the louvres will be a continuous row of windows.

Marathon Corporation
Menasha, Wis.

Rotogravure cylinder and photoengraving plate-making operations are now being carried on by Marathon Corporation in a newly constructed plant located in Menasha, Wis. Known as the Graphic Arts Bldg., the structure covers an area of approx. 200 ft. by 400 ft. Total working space is approx. 43,000 sq. ft. Marathon occupies about three-fourths of the building and leases the remainder to an electrotype concern.

Basic construction of the new plant is concrete, masonry and steel. The exterior is faced with brick. Floors are concrete and asphalt tile. Pastel colors on walls and ceilings complement natural and artificial lighting. Roomy production areas are departmentalized.

The photoengraving department includes facilities for printing and stripping, color separation, zinc etching, routing, finishing, proofing and color etching operations.

Views of Marathon's Production Departments and Storage Facilities

1.—Cylinder plating and grinding department is equipped with two grinders at left, copper plating tanks on right and two chrome tanks in background.

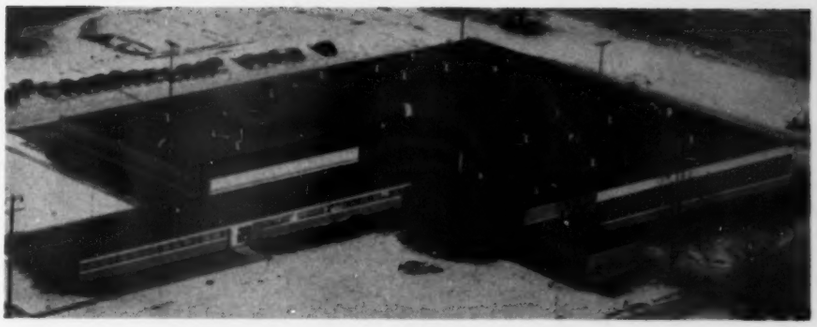
2.—In the gallery area, Marathon uses a 31 in. Robertson camera at left, a 31 in. ATF camera in center and a 24 in. Consolidated camera with straight-away and right angle bed for prism at far right. Gallery is air conditioned.

3.—Roto cylinder etching, left, and roto finishing operations, right, are performed in this area. Etchers and finishers have benefit of north light.

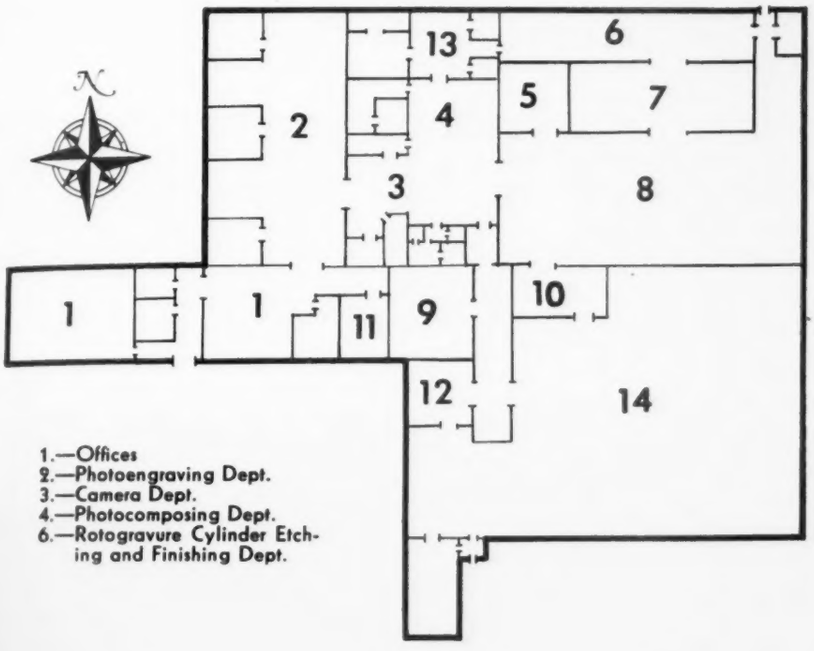
4.—About 8000 rotogravure cylinders can be stored in warehouse area. The racks shown in this section, and the ram lift truck, which is used to position or remove cylinders, are Marathon-designed.

Rooms which house the camera gallery, the step and repeat operation printing and transfer are air conditioned.

Roto etching and finishing, cylinder plating and grinding and cylinder storage also are in departmentalized areas. Electrotype services, an auxiliary operation, includes plate inspection, receiving and shipping, pattern storage and a composing room.



Air view of the Marathon Corp. plant in Menasha, Wis.

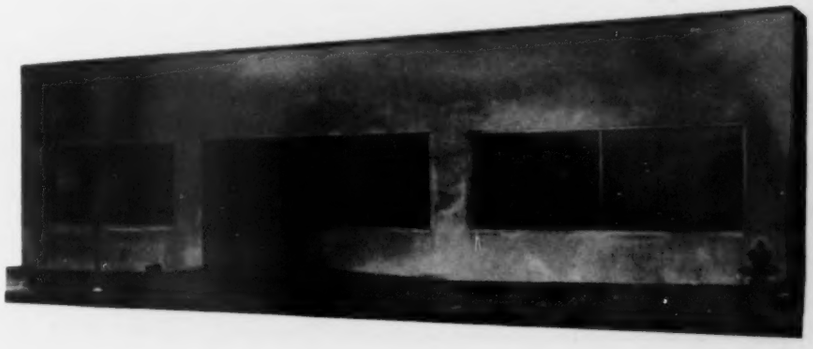


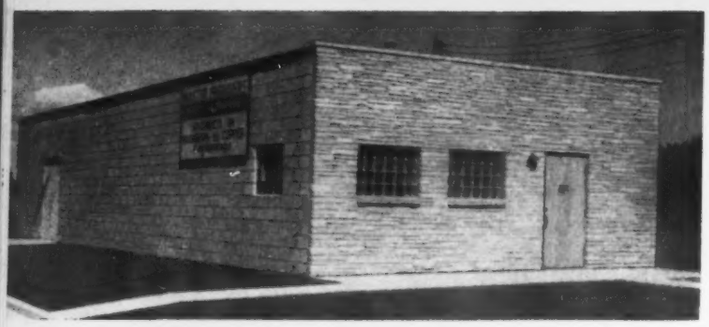
1.—Offices
2.—Photoengraving Dept.
3.—Camera Dept.
4.—Photocomposing Dept.
6.—Rotogravure Cylinder Etching and Finishing Dept.
7.—Cylinder Plating and Grinding Dept.
8.—Cylinder Storage, Receiving, Shipping and Electrotype Inspection Area
9.—Composing Room
10.—Electrotype Service and Pattern Storage Area
11.—Conference Room
12.—Boiler Room
13.—Locker Room
14.—Neenah Electrotype Co.

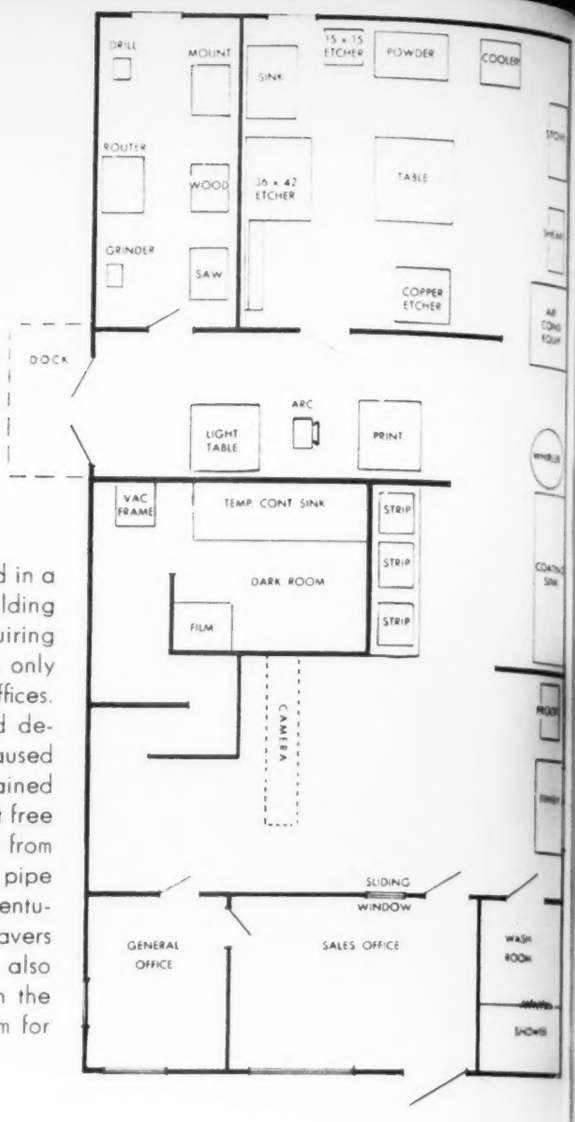
During 1953, Marathon manufactured approx. 5500 photoengravings; etched and finished about 6000 roto cylinders; copper plated over 2600 cylinders and chrome plated approx. 5200 cylinders. Over 50,000 patterns are filed and stored.

Seaside Publishing Co., Seaside, Ore.

A combination commercial printing and weekly newspaper plant in the Pacific Northwest occupied new quarters in December 1954. New home for the Seaside Publishing Co. of Seaside, Ore., is a one-story 35 ft. by 80 ft. concrete block structure. Concrete floors, acoustical tiled ceilings and fluorescent lighting are featured throughout the plant. Publisher Max Schafer states there is a minimum of 50 ft. candles for illumination everywhere in the plant. The new quarters are heated by a hot air furnace. The company publishes the Seaside **Signal.** Production equipment in the plant includes a Model 30 Linotype and 3C-sm Intertype linecasting machines, Goss Comet press, Kelly cylinder press, and Heidelberg and 12 in. by 18 in. Kluge platen presses.







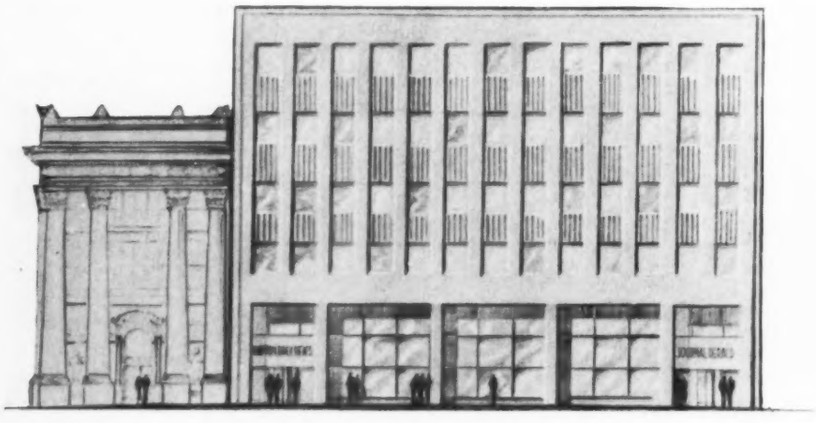
Master Engravers, Fond du Lac, Wis.

(Courtesy of *The Photoengravers Bulletin*)

Master Engravers is a small, compact photoengraving plant located in a new 30 ft. by 60 ft. concrete block building in Fond du Lac, Wis. The building (shown above) has been constructed with a laminated trussed roof requiring no supports, thus having no posts in the interior. It is designed with only three windows and with air conditioning in all departments and offices. According to Ray Yorton of Master Engravers, air conditioning and dehumidifying posed a problem because of the variable heat loads caused by the burning-in stoves, arc lamps, etc. However, the plant is maintained at constant 71 deg. F. with relative humidity of 68%. The plant is kept free from fumes by an exhaust duct system that removes all acid fumes, dust from powdering cabinets, heat from burning-in stoves and arcs by direct pipe connection. Off street customer parking is provided in an area that eventually will serve as space for planned additions to the plant. Master Engravers produces magnesium engravings almost exclusively although it is also equipped for making copper printing plates. Asphalt tile is used on the floors of some departments and in the offices. There is a shower room for employees. A floor plan of the plant is shown at the right.

Dayton (O.) Daily News

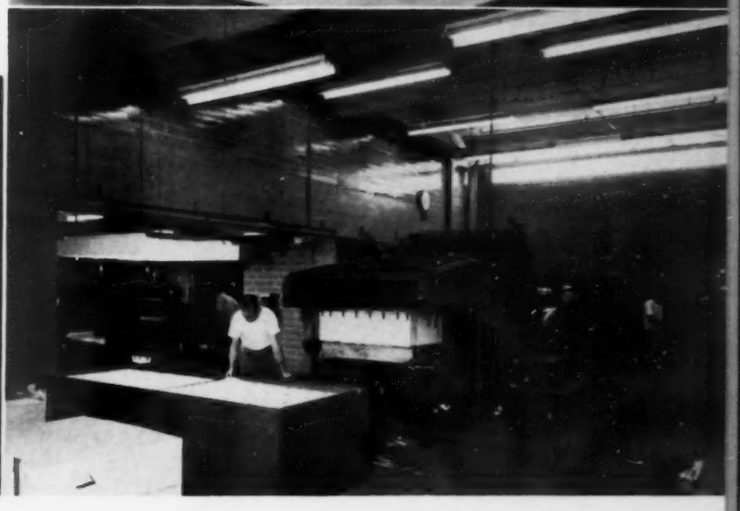
A $3 million expansion program is already underway by the Evening News Publishing Co., Dayton, O., publishers of the Dayton **Daily News** and Dayton **Journal Herald.** Scheduled for completion by late summer is a six story building (shown below, right) which will adjoin the original **News** building (at left). Both newspapers will use the same mechanical equipment with expansion scheduled for most of the production departments. The Austin Co is the architect and engineer.



The front of the new structure is being designed along modern architectural lines with wide usage of glass and aluminum trim. Basement facilities will be used for enlarged newsprint storage. Loading docks at the rear of the building will supplement present facilities.

An entirely new composing room will be housed on the building's fourth floor. Other floors will accommodate circulation, payroll, finance, promotion and editorial departments. Administrative offices, kitchen, snack bar and lunch room will be other features of the new building.

Augsburg Publishing House
Minneapolis, Minn.



Augsburg Publishing House, producers of religious literature, art and music for the Evangelical Lutheran Church, has moved part of its printing facilities into a $1¼ million building located in downtown Minneapolis. The building is constructed of concrete, brick and Mankato stone (upper right).

Main floor and lower levels of the structure provide an additional 38,000 sq. ft. of plant and office space for the publishing house. Departments of the Evangelical Lutheran Church, owner of Augsburg, take up the top three floors. The publishing house continues to use its former location to house composing room, bindery, mailing and shipping departments, as well as the letterpress pressroom.

The new building provides space for the offset pressroom (lower right), cutting, wrapping and shipping departments for lithographic publications. A connecting tunnel on this level facilitates the production flow between the old and new buildings.

Equipment layout of the various production departments and offices was accomplished with the use of dimensional scale models (lower left), accurately positioned on ruled sheets. Note the Plexiglas pieces used to show location of the structure's columns. Paul Ocken, Consultant of Graphic Arts Industry, Inc., Minneapolis, executed the layout of Augsburg's new quarters. Architects were Lang & Raugland.

The building is completely air conditioned and heated by a gas-oil combination. It features fluorescent light, acoustical ceilings and a sprinkling system. A pneumatic tube system connects the offices of all the buildings.

Considerable rearrangement and remodeling of its old building has made possible an expansion of the shipping department and changes within the mailing room and bindery. Randolph E. Haugan is general manager of Augsburg Publishing House.

Clinton (Ia.) Herald

A $150 thousand addition is presently being made to the plant of the Clinton (Ia.) **Herald**. Completion of the project (which is expected in July of this year) will provide the **Herald** building with a 75 ft. frontage, an increase of 45 ft. The new addition will house the mail room, editorial, advertising, circulation and business offices. This is the second phase of an expansion and modernization program being carried out by the Clinton newspaper. Previously the equipment layout in the composing room was revised to speed workflow. The building is to be air conditioned and will have fluorescent lighting. McCann-Prout and Associates are the architects and engineers.

Tucson (Ariz.) Newspapers, Inc.

For the second time in 14 years, Tucson Newspapers, Inc., which publishes the Arizona **Daily Star** and Tucson **Daily Citizen,** is in new, greatly expanded quarters (shown above). The mechanical portion of the move was completed last July, but it was only February of this year that all the remodeling details were finished.

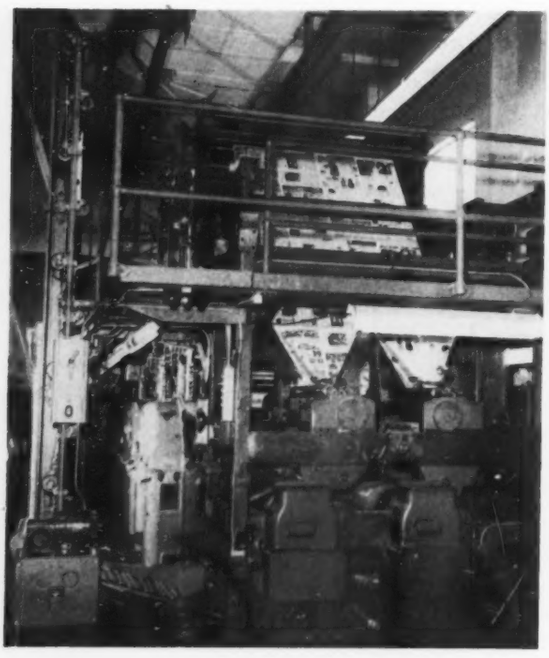
An additional 43,500 sq. ft. of floor space has ben added, making a total of 66,000 sq. ft. for the entire newspaper facility. The composing room was increased in size from 2240 sq. ft. to 6950 sq. ft. Eighteen linecasting machines have been moved into this department, with space left for the addition of 10 more. The stereotype department now operates with practically all new equipment. It has been increased in size from 624 sq. ft. to 1427 sq. ft.

Wood block flooring has been used in the mechanical departments, while the office floors are covered with rubber tile. Fluorescent lighting is used throughout the building. The entire new addition, including most mechanical departments, are cooled by an air refrigerating system of 140 T. capacity.

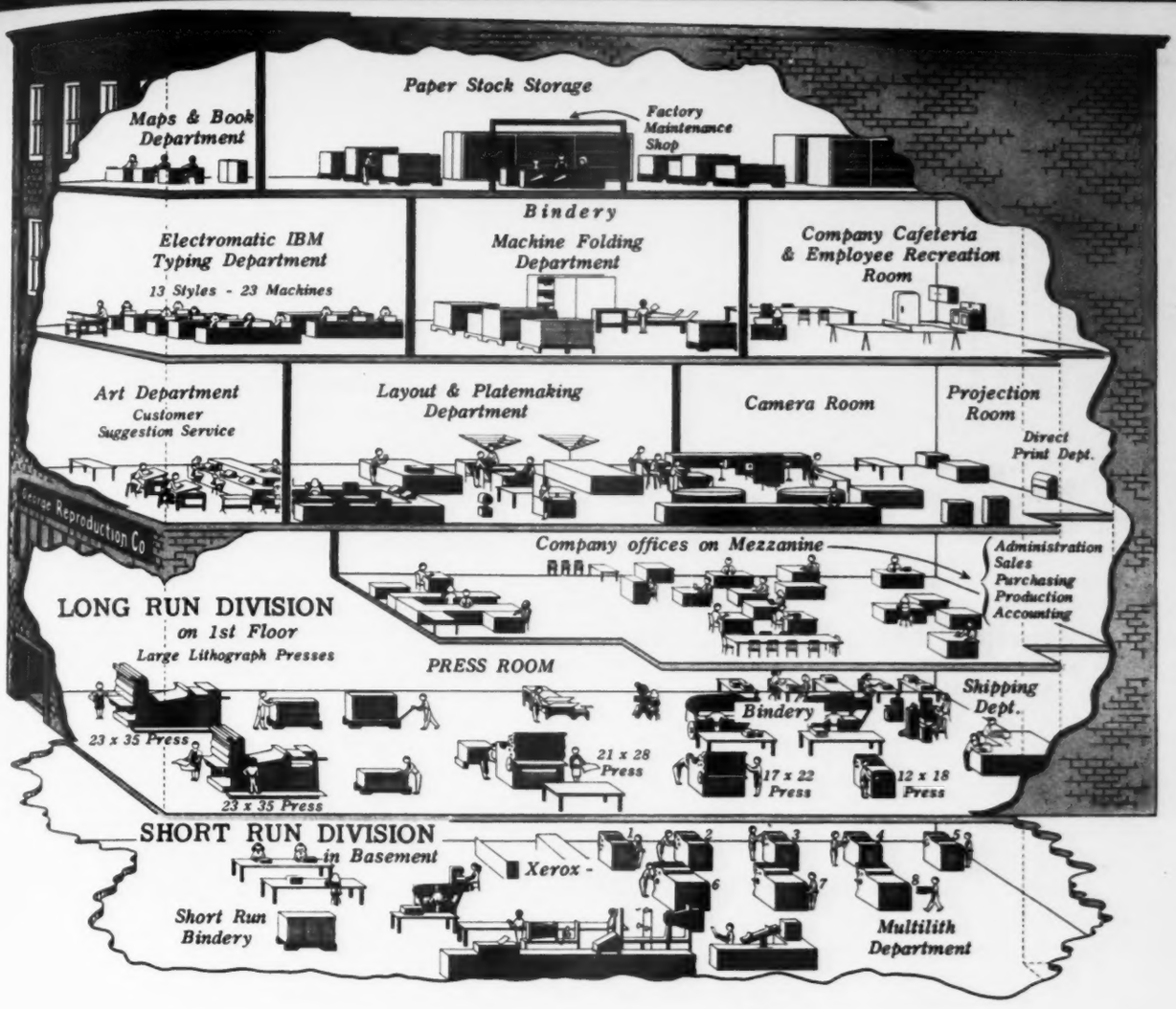
Several major pieces of equipment were installed prior to the move of the mechanical department. In the composing room and stereotype departments, locations of every machine and other pieces of equipment were indicated on blueprints. Each item of equipment was designated by number and the area of its base was painted on the floor. The electrical current for each was also noted. Each workman was furnished a blueprint.

After this preparatory work the move was a matter of timing. The display typesetting equipment was moved first, beginning at 7 p.m. on July 3. The deadline of the Sunday **Star** was advanced to 11 p.m. After this edition was out of the way the moving crew tackled the straight-matter machines. By 11 a.m. on Sunday, July 4, the entire two departments had been moved. All machines had been permanently wired. At 4 p.m. on the same day the entire plant was in full operation for the production of the Monday morning **Star.**

It is interesting to note, according to reports, after a half year of operation not a single piece of equipment has been moved from its initial position. This proves the advice given by many engineers that "careful planning pays dividends."



View of Tucson Newspapers, Inc.'s, new four unit Goss Headliner press. The press is equipped with one double folder and a color deck. There is a 9000 gal. ink supply system. The pressroom has been planned to accommodate six additional 16 page units and another double folder.

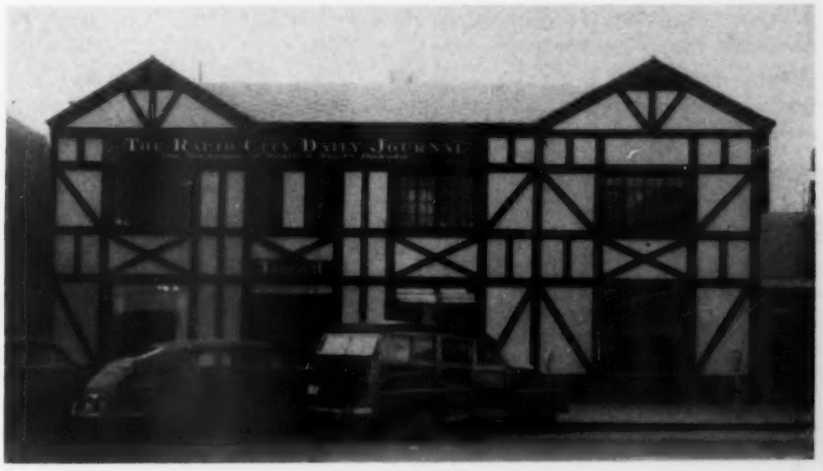


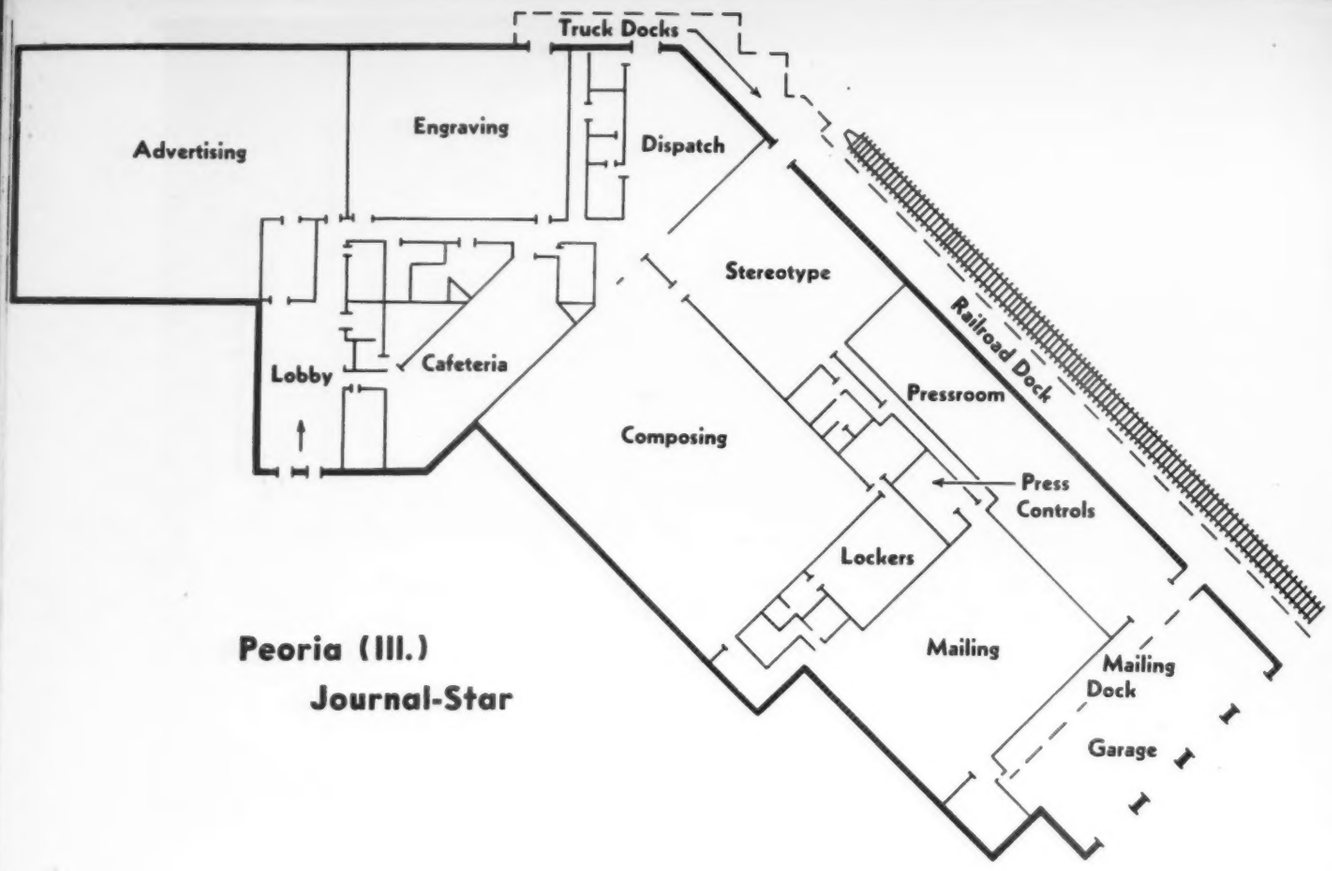
George Reproduction Co., San Francisco

The cut-away view of the building above affords an excellent picture of the production departments and offices of the George Reproduction Co., San Francisco, Calif. This offset plant, operated by W. T. George, is equipped for producing a variety of work. Each department is appropriately labeled and its equipment identified. Fluorescent lighting is used on all four floors and in the basement of the plant.

Rapid City (S. D.) Daily Journal

A 17 ft. addition has been added to the Rapid City (S. D.) **Daily Journal's** building shown at right. The addition included basement, main floor and half of the second floor. Concrete and tile covered floors are used in the new addition. It is equipped with an outside air-water cooling system and fluorescent lighting.





Peoria (Ill.) Journal-Star

Late this year, the Peoria (Ill.) **Journal-Star** will move out of the congested downtown area of that city into a $1 million printing plant designed for efficient production. In the two stories and basement will be housed all mechanical departments, advertising, business and editorial offices, and paper storage facilities.

Swift Engineering Co., Chicago, engineered the new printing plant in collaboration with Graphic Arts Industry, Inc., Minneapolis, Minn. Architects are J. Fletcher Lankton and John N. Ziegele, Peoria, Ill. A new Goss Headliner press being installed will permit running a 128 page newspaper. Color printing units are included in the installation.

A railroad siding of the Rock Island Railroad will permit unloading of the newsprint rolls at a special dock built along one side of the plant (see floor plan above). Several other docks will accommodate trucks for receiving and shipping operations.

Plenty of Light

It is said the building will include one-fifth of a mile of windows. It has also been designed for expansion and future growth. Roofs will be constructed to provide for an additional story when needed.

Interior of the pressroom will have glazed tile walls and metal acoustical ceiling. Paper storage space will accommodate 2000 rolls of paper. The press units are to be installed on a cushioned concrete base designed to reduce vibration.

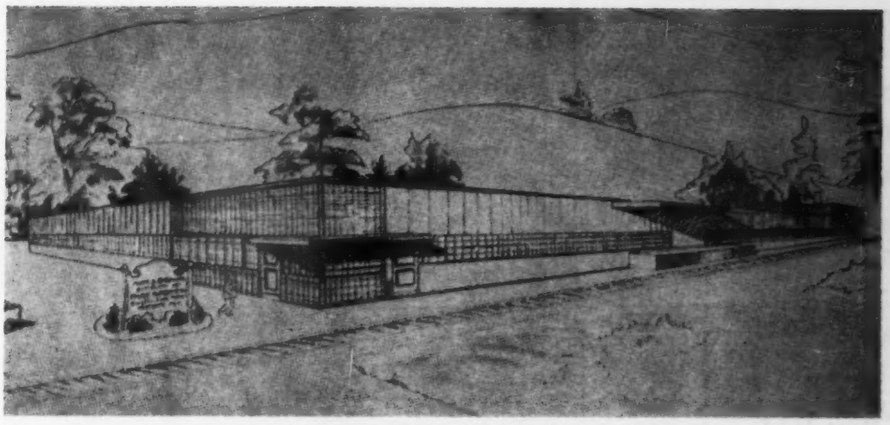
Workers Kept in Mind

The mail room of the **Journal-Star** will be equipped with conveyor belts and special loading ramps to speed the loading of trucks. The new building will include a cafeteria with 100 seating capacity, a fully equipped kitchen, employee lounge and a photo department with studio facilities. Acoustical ceilings will be installed throughout the structure.

Locker rooms and showers will be provided for workers. The large lobby has been designed for public service. An elevator will operate to the upper and lower floors.

The plant is to be heated by hot water. The baseboard radiation will be supplemented by air handling units. A large parking area for employees' cars and for visitors to the plant will be one of the distinctive features of the new location.

Alan S. Browne, Inc.
Brattleboro, Vt.



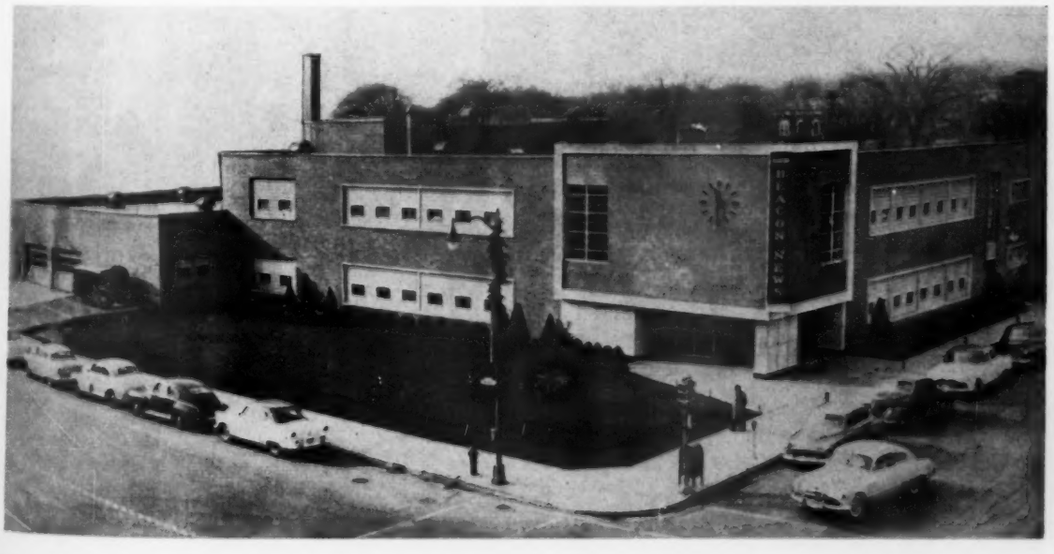
The complete book manufacturing facilities of Alan S. Browne, Inc., Brattleboro, Vt., a subsidiary of George McKibbin & Son, are soon to be housed in the modern plant shown in the accompanying artist's sketch. Occupancy is scheduled for late spring of this year. Features of the building include access to a railroad siding and a shipping dock designed to accommodate up to 10 trailer trucks. Large sections of the plant are to be humidified, dehumidified and air conditioned. Upon completion, the building will measure 241 ft. by 421 ft. and provide a total of 101,461 sq. ft. of floor space.

Aurora (Ill.) Beacon-News

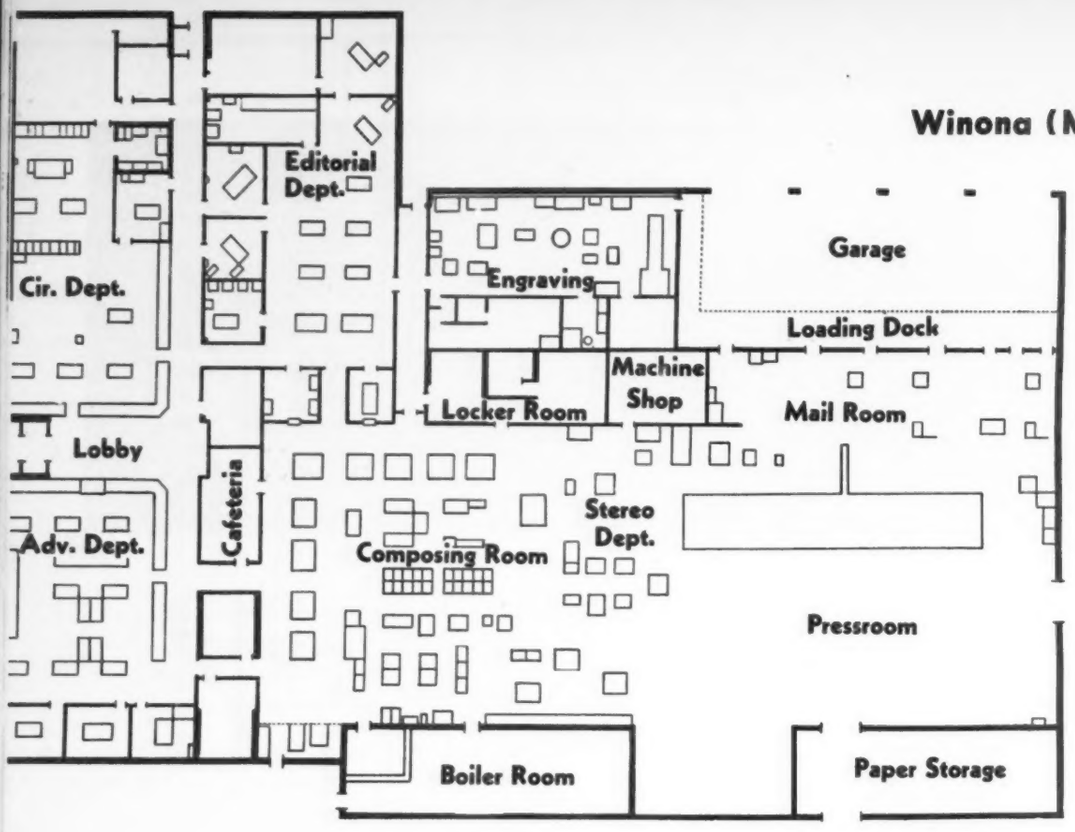
Shown below is the attractive new home of the Aurora (Ill.) **Beacon-News.** The building was constructed in two units, each with a frontage of approx. 100 ft. The first unit, which houses the pressroom, mailroom, garage, locker and shower rooms and paper storage facilities with space for 10 carloads of newsprint, was completed a little more than a year ago. The second unit, in which are located all the other departments, has been occupied since the latter part of 1954.

The entire structure is of reinforced concrete and steel frame construction with exterior walls of Roman brick. The attractiveness of the building has been further enhanced by the covered aluminum, glass-enclosed corner entrance which has been given a modern treatment with natural redwood, limestone and granite.

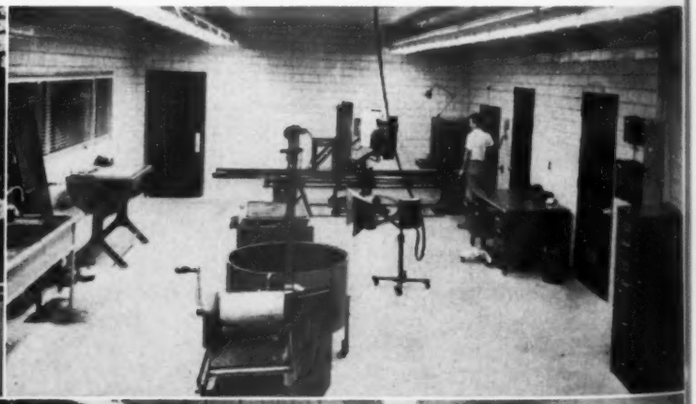
The first floor is entirely air conditioned with 25 T. refrigeration equipment, while the second floor is well ventilated. Fluorescent lighting fixtures are used throughout the building. Heating is provided by an oil-fired steam and hot water system. The structure is located on a ¾ A. site. Architects for the job were Gray, Laz and Mall, Geneva, Ill.



Winona (Minn.) Daily News

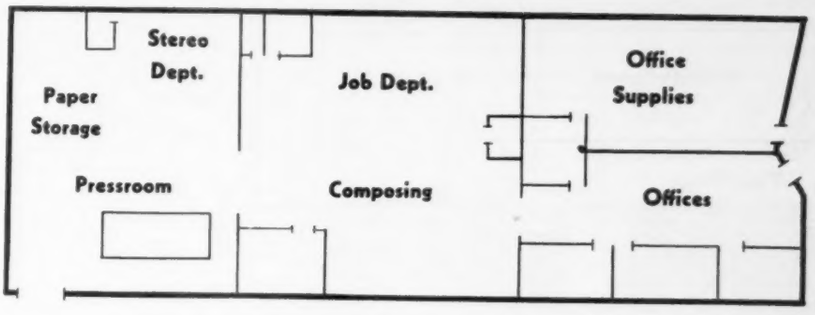


Mechanical departments and business, editorial and advertising offices were neatly and efficiently combined in a single floor plan (see above) to provide modern quarters for the Winona (Minn.) **Daily News.** This well-equipped small daily newspaper also maintains engraving and photographic departments (upper right) complete with darkrooms and a separate plate finishing room. The plant is illuminated by a fluorescent lighting system which is comprised of continuous rows of fixtures extending from one end of each room to the other. There is a tile floor of checkerboard design in the composing room (lower left) and cement floors in the other mechanical departments. The pressroom and mail room are shown at lower right. Also featured is a garage designed to accommodate four trucks and an inside loading dock adjacent to the mail room. The attractiveness of the building's front (upper left) is enhanced by a permanent overhead canopy which extends from the entrance to the front sidewalk. A parking area has been provided for employees and customers. Layout of the **News** building by Paul Ocken, Consultant, Graphic Arts Industry, Inc., Minneapolis, Minn.



Conroe (Tex.) Courier

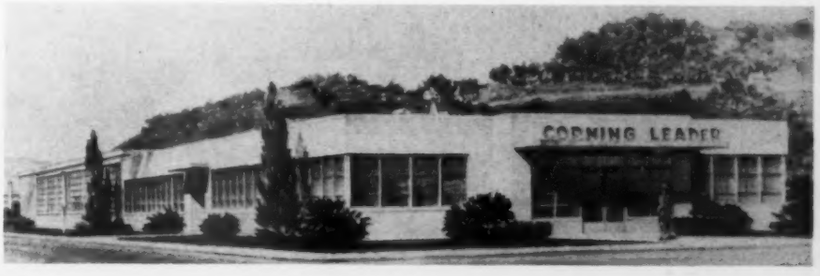
A combination commercial printing weekly newspaper and office supply business is located in the air conditioned building shown here. It is the home of the Conroe (Tex.) **Courier.** Features of the plant include fluorescent lighting and concrete floors. Frigidaire air conditioning units are used in the building. In addition to a variety of work, the firm also produces two weekly newspapers. Owner of the **Courier** is Rigby Owen. Floor plan of the building is shown at right.

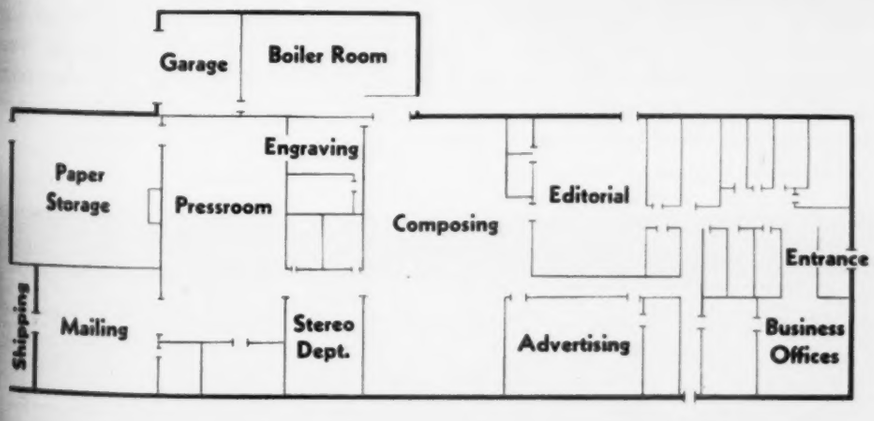


Corning (N. Y.) Leader

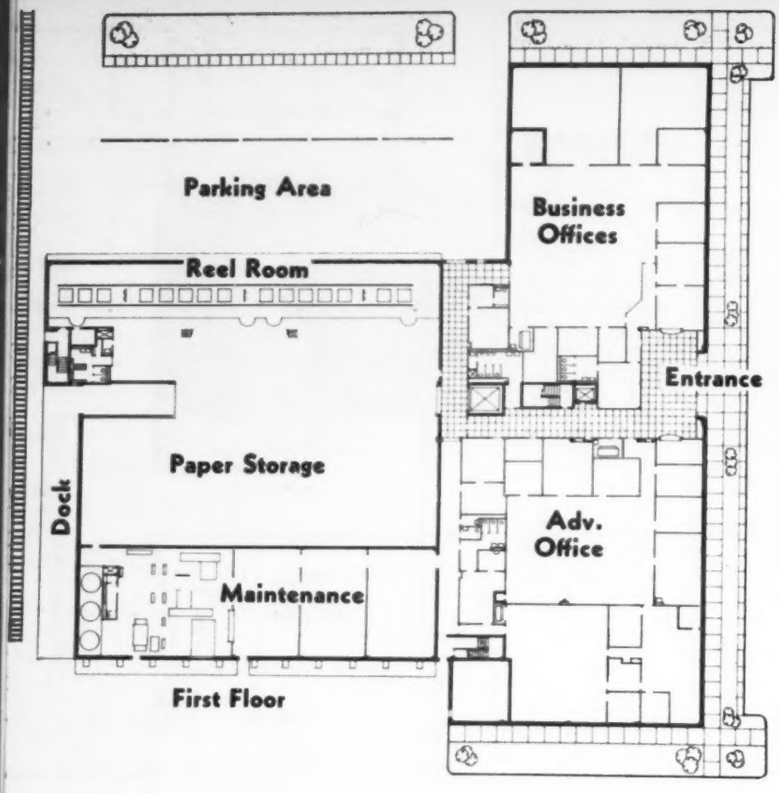
An 18,500 sq. ft. building was completed last summer as the new home of the Corning (N. Y.) **Leader.** Included in the expansion of the newspaper are two new 16 page Goss Dek-A-Tube presses. Entirely of one story without basement, the plant was designed with an eye to ease of access from department to department (see floor plan below).

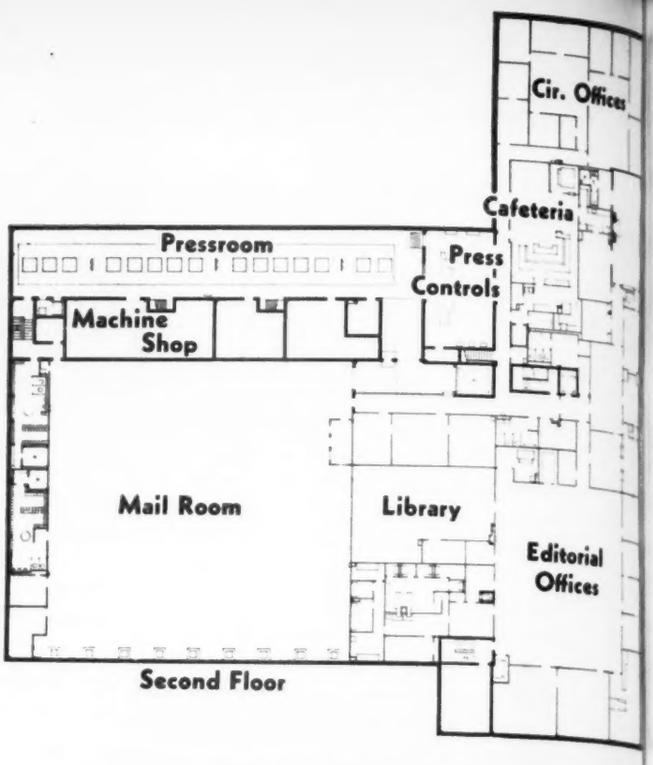
The building is constructed of steel and concrete block, faced with light brick. Continuous aluminum windows have been used practically all around the structure for maximum light. Partitions in the office area are removable. Floors in the mechanical departments are faced with Stonhard over concrete. Architects for the job were Haskell, Considine and Haskell, Elmira, N. Y.

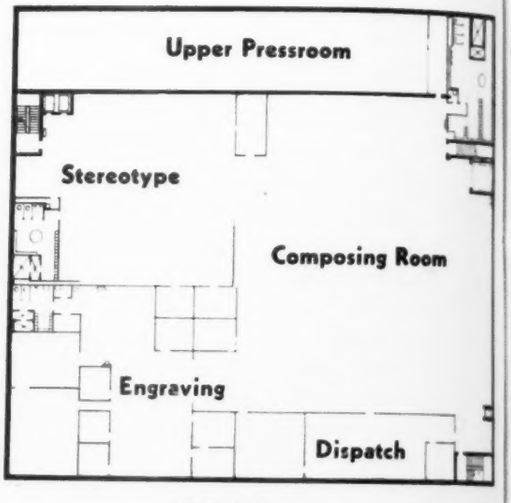




Some of the equipment added to the plant on its move included a combination stereotype and remelting pot equipped with immersion burners, water cooled pig mold, power miterer and slug stripper. The **Leader** is now located three blocks from the main business section of Corning.







Houston (Tex.) Post

The Houston (Tex.) **Post** started 1955 and its 70th year of publishing by occupying a modern $4 million newspaper publishing plant. The new plant covers a full city block directly adjacent to the **Post's** former location. Front section of the building (see below) is two stories high and the back section, which houses 15 Goss Headliner press units in one line and the other mechanical departments, runs three stories high.

There is no basement in the building. Reel room and paper storage area are on the ground floor level. The pressroom is on the second floor while the superstructure of the press extends into the third floor. (See floor plan layouts above and at right.)

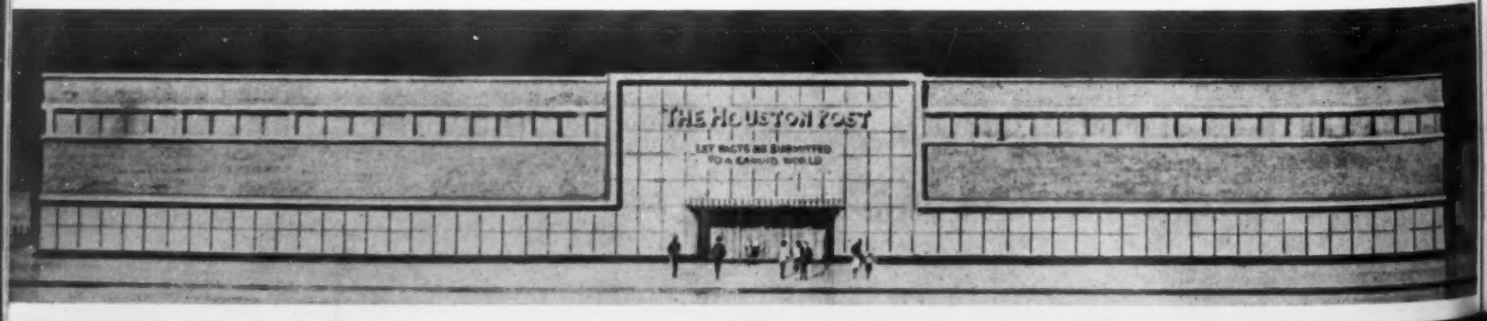
Texas pink granite, Indiana limestone, brick and tile were used extensively in the reinforced-concrete, fireproof structure. Second floor windows extend in a continuous band across the front and ends of the building with stone front rising two stories above the main entrance. First and third floors are windowless. Overall floor space is 118,000 sq. ft. Architects for the project were Herbert Voelcker & Associates.

Air Conditioned Building

The **Post's** new plant has been equipped with a completely automatic air conditioning system, living up to Houston's reputation for buildings with this feature. In addition to maintaining constant air temperatures throughout the building, the system also keeps circulating water at an established heat (or coolness) level at all times. A control panel provides centralized automatic operation of the 400 T. air conditioning equipment.

Multi-colored symbols on the panel depict all the parts that make up the water supply system for the building's air conditioning, such as water pumps, refrigeration compressors, cooling tower fans, water pipes and others. Miniature temperature and flow indicators serve to automatically start and stop the refrigeration machines according to the building's need for cooling.

The building is divided into 15 comfort zones, each of which has its individual air conditioning system controlled by an electronic temperature control system. A circulating hot and chilled water system will be used for winter heating, summer cooling and summer dehumidification. Two centrifugal-type refrigeration machines are used in connection with the chilled water system.



Staging and Color Correcting Time

Reported to be saved through use of Ansco-Kemart photographic paper in color process and halftone engraving.

A FLUORESCENT photographic paper that is said to make possible sharper definition and greater range of tones in newspaper r.o.p. color printing made its debut in the Minneapolis (Minn.) *Star* on Thursday, February 3. The Ansco-Kemart fluorescent photographic paper was used to produce six columns of color pictures.

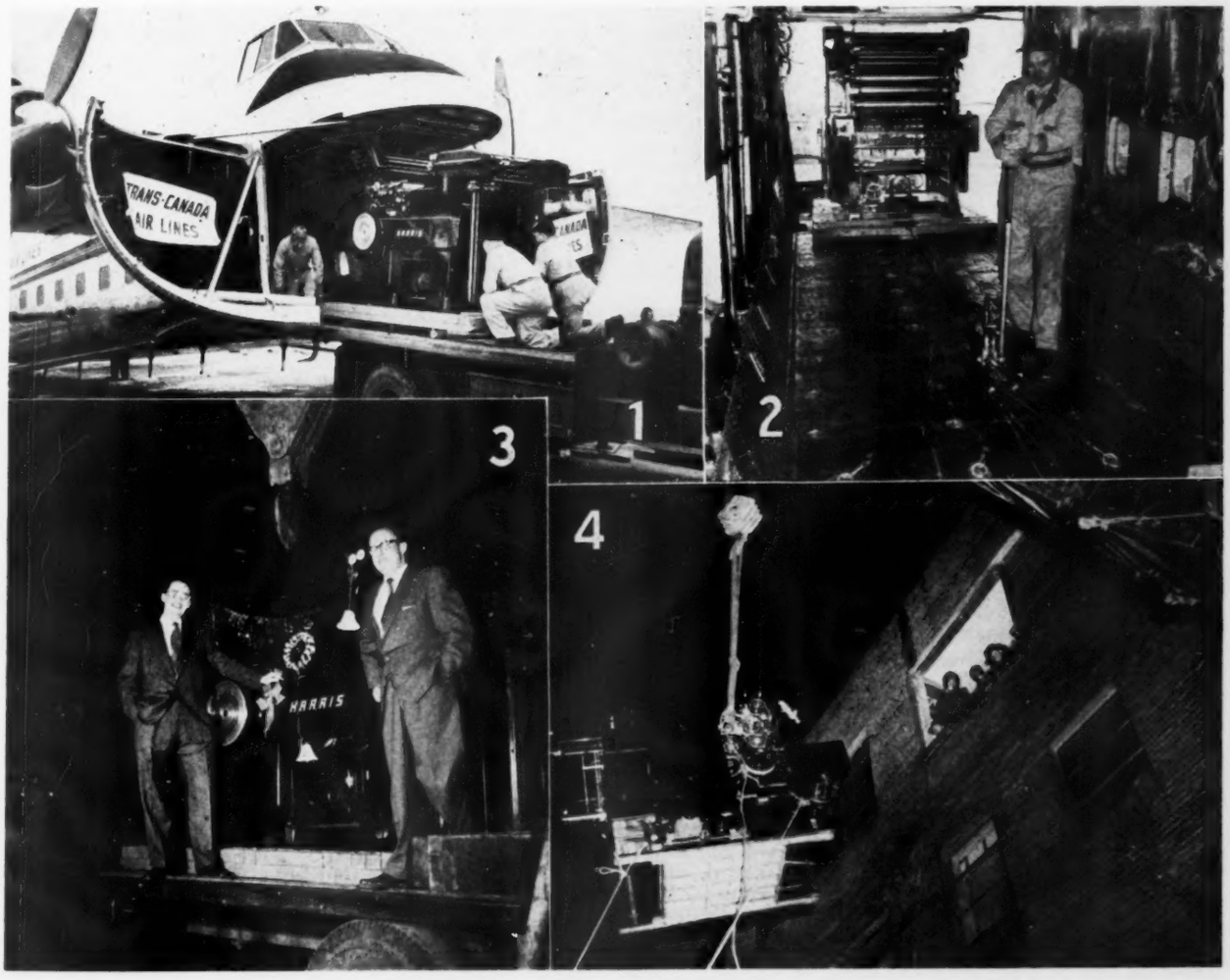
While no announcement has yet been made by the sponsoring manufacturer, informal comment among printing executives indicates that the new product will be applicable to commercial photoengraving and the offset process.

Staging and Correcting Mostly Eliminated

Most readers of *Printing Equipment Engineer* are familiar with the problem of obtaining true color values in a process job without staging (local etching or reetching) the various areas in the halftone itself. While this can be done by the skilled etcher with zinc, staging primarily has been confined to copper work as well as the better quality work which could support the cost. Newspaper engravers have done some of it but without extraordinary success.

Staging of the halftone has been considered necessary because of the properties inherent in dot formation. Basically, if detail and depth of values are to be brought out in the more solid and middletone areas of a halftone, there is an almost universal loss of values in the highlights. Consequently, to preserve some of the highlight values, the solid and middletones must be neglected. Result: Heavy solids lacking in detail. Thus the staging operation must be a compromise with much detail lacking in the deeper areas with washed-out highlights.

(*Continued on Page 89*)



Press Delivered to Canada by Airlift—A 4 T. offset printing press was recently transported by airlift from Harris-Seybold Co., Cleveland, to Clen-Mathers Press Ltd., Montreal, Can. It was reported to be the heaviest piece of air freight ever lifted from the Cleveland airport. The unusual method of shipment is shown in this pictorial presentation.

1.—The Model 128A 23 in. by 30 in. Harris press is loaded through the gaping cargo door of a Bristol Freighter cargo plane. The press was mounted on a standard wooden skid.

2.—The press is winched by cable inside the plane in preparation for the 600 mi. trip.

3.—Upon arrival at the Clen-Mathers plant, Dave (left) and Gerry Clendenning of that firm pose alongside their new press.

4.—A crane equipped with a 75 ft. boom was used to hoist the press from the truck to the pressroom on the third floor of the building. The press was said to be installed and in operation 24 hrs. after leaving Cleveland.

Blattenberger Presented Honorary Membership—At the Friday night, February 11 meeting of the Washington (D.C.) Club of Printing House Craftsmen, U. S. Public Printer Raymond Blattenberger (left) was presented an Honorary Membership in that Club. The presentation was made by Intl. Second Vice Pres. George Wise of Cleveland representing Intl. Pres. Thomas P. Mahoney who could not be present. Wise eulogized Blattenberger's many activities over a long period of time in the Graphic Arts industry. In turn, the recipient spoke appreciatively of the gift and praised Craftsmanship and all it stands for in particular. Also participating in the program were President Al Luther and Gene Davis, Fourth District Representative.

Progress Litho

(Continued from Page 49)

machine. The remainder of the equipment was brought in and erected for operation, handling one machine at a time.

Air Conditioning System

Air conditioning, humidity control and heating are combined in the plant under a single system. Dehumidification equipment is used in the platemaking department. The system is maintained to provide summer time temperatures of between 78 and 80 deg. F. and a relative humidity of 40%. In the winter, it is regulated for a 76 to 78 deg. F. temperature. Relative humidity remains unchanged.

The more than 150 employees of the firm participate in Progress sponsored activities. Pleasant lunch rooms and paved parking areas are other worker conveniences. The company is proud of the long-time service records of its employees. A fire brigade composed of employees trained in fighting different types of fires is maintained.

Nerve Center of Operations

Nerve center of Progress' operations is known as the Layout and Quality Control Dept. which is under the direction of General Supt. A. C. Sides. It is here where jobs are planned, layout is performed, work is scheduled through the plant, production controlled and quality of product checked.

Important in this department's activities are the Weekly Press Sheet and Master Control Sheet. The Weekly Press Sheet contains a listing of all the jobs being processed each week in the pressroom together with the press on which each is scheduled to run. The Master Control Sheet contains a listing of all jobs in the plant together with an indication of progress made on each from day to day. This information is obtained each morning by Superintendent Sides from reports provided him by each departmental foreman. Spot inspections for quality and other information are made from time to time during the day by the superintendent also.

Kinds of Plates Used

A well-equipped offset platemaking department functions to produce plates for up to the plant's largest presses—52 in. by 76 in. Albumen, deep-etch, trimetal, Aller, Lithure and other kinds of plates are all used here.

Impressive among the equipment used by the platemakers are three of the largest Lanston and Rutherford photocomposing machines manufactured for the industry. Other machines include a 48 in. Lanston overhead camera, three Rutherford plate coaters, power proofing presses, down-draft developing and etching equipment, and stripping and lineup tables. Despite this array of equipment for making a large volume of plates, it is necessary for the Progress firm to purchase some plates from outside sources.

Offset plates at Progress are proved on the same paper and with the same ink to be used on the actual press run. This enables the pressman to form an accurate comparison of how the job should look when he has completed his makeready operations and is ready to run. North light from the department's only window permits the platemaker to check his proof against the finished artwork.

No Composing Room Operation

There is no composing room maintained in the Progress plant. All type for jobs, whether photo, hot metal or handset, is from outside sources. Reproduction proofs and transparencies are furnished from which the offset printing plates are made.

Variety of Presses

Maximum sheet sizes of the presses in the Progress pressroom is evidence of the amount of production turned out by this company. The Harris and Miehle sheetfed offset presses operated range from 52 in. by 76 in. down to 35 in. by 45 in. Three AFT-Webendorfer web offset presses, ranging from 18 in. by 23 in. up to 32 in. by 41 in., make up the other major presses in this department.

Bronzing and embossing equipment includes a 44 in. by 64 in. Christensen bronzer, 52 in. by 76 in. Kohma bronzer and three Sheridan embossing presses.

Steel Equipment is Used

There are numerous items of interest to the mechanical executive in the Progress plant. Its management believes in using as much steel equipment as possible.

There is a well-equipped machine shop adjacent to the pressroom where maintenance and repair work is carried on for both mechanical and electrical equipment. Part of the company's facilities includes complete ink making equipment operated in a separate building. All ink produced here is used on Progress presses in addition to ink from outside sources.

Features of Outside Dock

The outside receiving dock is equipped with an automatic Levadock which raises or lowers to the proper tailgate height of trucks being unloaded. The unloading zone on the dock has overhead cover which permits continuance of work despite inclement weather. A track system with manually pushed dollies facilitates the movement of paper rolls from the dock to a paper storage pit inside the plant.

Solvent Stored Underground

Solvent used in the plant for cleaning purposes is safely stored in two 500 gal. underground tanks and pumped inside the building. One outlet in the plant is provided from which to draw off the solvent in order to reduce fire and explosion danger to one area. The tanks are buried in a fenced area outside the plant.

Acoustical Phone Booths

Acoustical phone booths have been installed in different locations within the plant to facilitate telephone communication between any production department and the front offices. The acoustical paneling in such booths is designed to permit audible phone conversation.

Evidence of the complete equipment housed in the bindery is shown in the accompanying floor plan layout. In addition to Baum and Cleveland folding machines of varying sizes, there is also equipment for producing a variety of work. Paper cutting operations are performed in a separate department and shipped directly from there if no further finishing operations are required.

Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

Views of Progress Litho Co.'s Production Departments

1. One of three photocomposing machines in the suburban Cincinnati firm's platemaking department for obtaining multiple reproductions from original copy. These machines (all three models are the largest size made) are particularly useful at Progress in its production of labels, gift wraps, greeting cards, etc., which requires ganging the same image on one plate for profitable operation.

2.—Air conditioning, humidity control and heating are combined into the one system shown here. The system is maintained to provide summer time temperatures of between 78 and 80 deg. F. and a relative humidity of 40%. In the winter, it is regulated for a 76 to 78 deg. F. temperature. Relative humidity remains unchanged. Surface Combustion's Kathabar dehumidification equipment is employed in the platemaking department only.

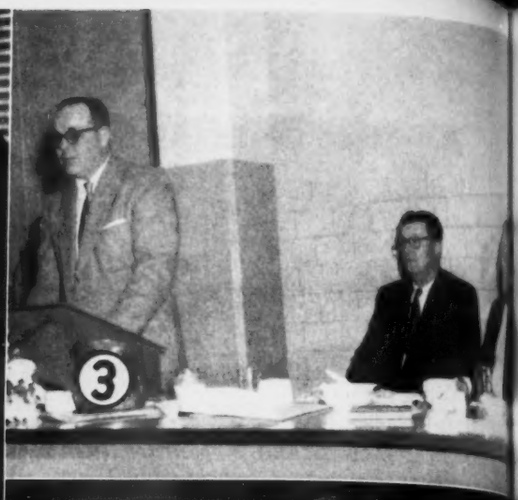
3.—Roller storage rack in the pressroom of Progress Lithographing Co. Two such racks are used in the plant to accommodate both inking and dampening press rollers. It is constructed of steel girders and angle iron throughout to provide the strength necessary to hold the large rollers. End pieces were specially forged to fit the requirements of the rollers' steel cores. Sections of the rack vary in height to accommodate the different lengths of rollers.

4.—The firm's 32 in. by 41 in. four-color ATF-Webendorfer web offset press is shown in the foreground. In the background is the roll paper storage section for supplying this press and two other ATF-Webendorfer web offset presses. The paper rolls are stored in a 6 ft. deep pit which is difficult to see in this picture. The pit was designed to provide greater storage space as the rolls are stacked one upon another. It will accommodate 30 truck trailer loads or 600 thousand lbs. of paper rolls. An overhead electric hoist (not shown) is used for moving the rolls in and out of the pit.

5.—The five-color 52 in. by 76 in. Miehle sheet-fed offset press. This is the largest of the company's presses. All five-color work is assigned to this press.

6.—A view of the Progress pressroom showing the delivery end of the various multicolor presses. Notice also the ample aisle widths for unhampered movement of materials through the department. Each press is assigned a work table for inspection of press sheets. Two of the company's six Harris offset presses can be identified at the right.

7.—A well-equipped bindery is maintained by Progress as shown in this view. Sufficient space has been allotted for aisle movement as well as future installation of new machines. In the foreground is an automatic inserter, stitcher and three-knife trimmer. Other equipment which can be identified in the picture is a nine station stitcher (at left), Brackett trimmer and folding machines.



OBJECTIVES
TING WEEK

CLEVELAND CLUB

SILK SCREEN PRINTING

1955 Printing Week Most Spectacular of All

(All names read from left to right)

Live television presentations, whirlwind cross-country speaking tours by leaders of Graphic Arts organizations, selection and presentation of Printing Week queens, and plentiful coverage in colorful special newspaper sections were among the showers of activity which fell across the nation's printing industry for one week in January. Printing Week was observed in many towns in the U. S. and Canada because in it was included the birth date of Benjamin Franklin, Printer. The observance was sparked by the Intl. Assoc. of Printing House Craftsmen through its chairman, Floyd C. Larson, who is director of the U. S. Navy Printing Office, Great Lakes, Ill. In some cities the celebration was staged for the first time while in others past programs were enlarged upon and improved. There were a number of objectives—promotion of the industry, education of the public, recruitment of young people into the industry, understanding relationship among groups within the industry, etc.—which all seemed to make worthwhile the year of planning which the successful week demanded. Space does not permit us to mention every activity in every city. On the opposite page, *Printing Equipment Engineer* has endeavored to provide a representative pictorial presentation showing some of the people who participated.

1.—Los Angeles tagged two lovely representatives of the Graphic Arts industry with title names familiar to printers. Bonnie Hunt was named Miss Etaoin and Pat Schmid was heralded as Miss Shrdlu who are shown here on tour of one of the local printing plants.

2.—Among the numerous documents signed by local and state government officials to set aside the week of January 16-22 as Printing Week was one proclaiming the observance in the Duluth, Minn.-Racine, Wis. area. Shown at the signing ceremony are Elmer H. Tess of Duluth, Printing Week chairman; Robert E. Baumberger, Superior's city manager; and Ray Somerville of Superior, Printing Week co-chairman.

3.—Dayton (O.) Craftsmen and PIA members heard Frank F. Pfeiffer (speaking), executive vice president, Reynolds and Reynolds Co., that city, speak on *Leadership Is Your Responsibility*. At the head table were Gordon Rohde, president, and Howard Massman, secretary, both of the Dayton Craftsman's Club.

4.—Detroit staged a program on *The Buyer Looks Forward to 1955*. Participants were: (seated) E. W. Thomas, Speaker-Hines Printing Co.; Paul Sampson, Sampson & Johnston, Inc.; John M. Allman, Tri-Craft Press; John M. Hulber, Chrysler Corporation; and Daniel J. Henry, Douglas Offset Co. Members of the program committee were: (standing) Robert Durling, Burkhardt Company; C. C. Means, manager, Graphic Arts Assoc. of Michigan; A. T. Annen, Shelby Photo Engravers; Harry Peets, American Type Founders; Cecil J. Jourdan, Evans-Winter-Hebb, Inc.; and Marvin R. Lohr, Michigan Litho Graining and Supply Co. All are from Detroit.

5.—A bookbinding apprentice, Miss Lavella Webb, was named Miss Printer's Devil in San Jose, Calif.

6.—Haywood H. Hunt, well known Craftsman of San Francisco, presented Miss Perfect Type her symbol of office. She is Marilynn Torrison of that city's Precision Electrotype Co.

7.—Albuquerque (N. M.) Craftsmen chose Miss Perfect Type to reign over that city's observance. Shown with her are Leon Ulrich, George Jackson, Curtis Stubblefield, Ernie De Valk and Wayne Boring.

8.—The newly formed Central Pennsylvania Craftsman's Club installed its officers during Printing Week. Shown are Vernon L. Spencer, first vice president; Richard Hugendubler, secretary; R. Randolph Karch, president; Benjamin Lowengard, treasurer; and Samuel L. Sprecher, second vice president.

9.—The celebration was proclaimed in Colorado Springs, Colo.; with the signing of a proclamation by Mayor Harry Blunt (seated). Louis Rosenthal, Printing Week chairman, and George LeCrone, local Craftsman Club secretary, look on.

10.—Cleveland picked a queen and two attendants. Kae Evans, Cleveland Letter Service; Carol Ann Finegan (named Miss Graphic Arts), American Greeting Card Co.; Ray Saks, Allied Decals, Inc., and Ilona Mosolygo, American Greeting Card Co., pose after receiving their awards from Saks.

11.—Ernie Rich of Screen Flock Co., Chicago, demonstrates screen process printing at that city's Museum of Science and Industry.

Miller Offset Presses

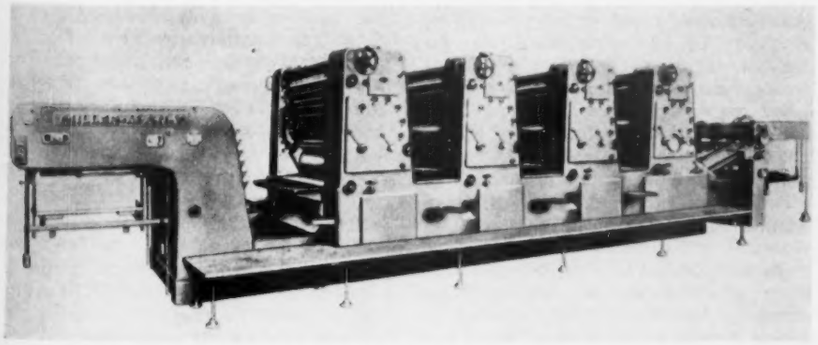
A line of single, two, three, four and five color offset presses has been announced by the Miller Printing Machinery Co. The presses are available in three sizes taking maximum sheets of 30 in. by 42 in., 36 in. by 48 in., and 40 in. by 56 in. They will be known as the Miller-M.A.N. The initials represent the name of the manufacturer, Maschinenfabrik Augsburg-Nurnberg A.G. of Augsburg, Germany.

All moving parts pertaining to the drive or control mechanism are lubricated by a continuously circulating flow of oil supplied through built-in oil pumps contained within the sealed housings. All driving gears and control mechanisms are placed outside of the press frames permitting shorter distance between cylinder bearings. All driving gears are helical and ground.

The multi-color Miller-M.A.N. presses are of unit construction. Single color units may be added to a two color press, thereby converting it into a three or four color press.

A stream feeder is provided as standard equipment with delivery and feeder boards interchangeable. Special quick change stream feeder available as optional equipment providing for practically continuous operation of both feeder and delivery piles. The presses are equipped with motorized feeder pile lifts. All rollers may be set by turning adjusting knobs located outside the press. Hand wheels are used to give stepless ink and dampening ductor regulation while press is in motion.

The inking mechanism is positioned above the printing units. Chain delivery with large radius phenolic guides is said to provide quiet operation, long chain life and good delivery of all paper stock, including cardboard. Built-in removable washup pans for water, acid, sponges and rags are provided. For more details, please mention PEE No. 428 in your request.



The Miller-M.A.N. 36 in. by 48 in. Four Color Offset Press announced by Miller Printing Machinery Co.

Overseas Exhibition

The Tenth Intl. Printing Machinery and Allied Trades Exhibition, known as IPEX, will be held at Olympia, England, July 5-16. It has been recommended by John O. Crabtree, chairman, Exhibition Committee, that group visits should be arranged through travel bureaus for satisfactory travel and accommodation facilities. The Exhibition Committee will assist in making arrangements.

This engraver is inspecting the quality of work on a bi-metal plate which he has just etched in the Etchmaster machine.

Bi-Metallic Photoengraving Plate and Self Banking Etching Process

By D. L. O'BRIEN, jr.*

*Chemist, Wire Coating & Mfg. Co., Cleveland, O.

THE purpose of this paper is two fold: First, I would like to describe our bi-metallic photoengraving plate development, and second, I would like to explain the development and nature of our self-banking etching process.

In the spring of 1951, Wire Coating and Mfg. Co. was engaged in the development of processes and procedures suitable for the finishing of magnesium metal parts. We felt this undertaking had merit in that several of the automotive manufacturers were so engaged and had, likewise, encouraged us to explore any possibilities along this line. At this time, we were approached by a group interested in magnesium as a photoengraving metal, more particularly a zinc plated magnesium sheet. We had had a moderate amount of success along this line, but the art and practices of photoengraving were completely foreign to us. In conventional electroplating, adhesion, coverage and appearance are the primary objectives. If the requisites of photoengraving are to be incorporated with those of electroplating, a highly specialized and difficult assignment is resolved.

For example, if the thickness of zinc applied to the magnesium sheet exceeds 0.001 in., powdering must be resorted to before the plate is cleared of zinc, in which event a clean breakthrough is impossible. If the thickness of plated zinc is less than 0.0001 in. or 0.0002 in., excessive porosity results. In this event, the enamel hardens in the pores and causes excessive dirt in the bottom of the engraving. If the distribution of zinc is not as uniform over the surface of the magnesium sheet as is possible, uniform breakthrough is not possible and both of the aforementioned difficulties are encountered. If the surface of the magnesium sheet is not uniformly polished and its surface properly prepared before plating, these polishing lines become evident as etching proceeds. This point alone consumed nearly a year of exploratory effort, for it had been felt that a raw unpolished sheet of magnesium could be used.

The structural quality of the plated zinc itself is important. As the grain structure becomes finer, the hardness increases and the ductility and adhesion decrease. As the grain becomes more coarse, softness, ductility and increased adhesion result as does increased porosity. An optimum grain size is, therefore, necessary to give good tooth for the enamel and softness and ductility for adhesion when heating or forming the finished engraving. These problems were solved by proper rack design; proper metal surface preparation; proper treatment times, temperatures, voltages and chemical balance of the actual electroplating solutions. Special back coating materials had to be formulated since the materials commonly used have no tolerance whatever for the electroplating solutions. Finally, the problem of packaging the plated magnesium metal was solved. We learned that to prevent staining the highly activated zinc surface by any residual chemicals, the plates had to be stacked face to face separated by a sheet of high purity paper.

From this description, you may well imagine the time and money expended in the development of this product. But we have done so only because we felt the zinc plated magnesium engraving metal had certain inherent advantages over either zinc or magnesium alone. These advantages being

(1) Ease of application of any enamel suitable for engraving.

(2) Rapid etching rate, the strength and the lightness of the magnesium base metal.

(3) Compatibility of the metal with practices and equipment currently used.

(4) Protection offered the magnesium by the zinc in storage.

(5) Galvanic action produced by the solution of magnesium in the zinc magnesium couple.

This last point brings me to the second purpose of this paper, namely, to describe the self banking etching process. The process is closely allied with the bi-metal plate itself and, to understand this process, a closer examination of the metal and its etching environment should be made.

First, the base or supporting medium is a highly reactive metal. Second, the print carrying surface is a dissimilar less reactive metal, and third, the base metal and surface metal are intimately bonded. If this bi-metal plate is immersed in a suitable acid etching solution, the surface coating will dissolve away exposing the base metal to the same action. There is nothing unusual about this phenomenon until selective portions of the surface metal have been protected by an acid resistant print or design. In this event, only the exposed or unprotected metal is dissolved, leaving enamel topped pillars of the less reactive coating metal. As etching continues through the surface and on into the more reactive base metal, a specific change in the etching process results. This change manifests itself in the form of an electric potential, in other words, a simple voltaic cell has been formed.

In conventional etching, this source of energy cannot be utilized since no means is available to separate the negative charge from the positive charge. The bi-metallic plate, on the other hand, can and does utilize this energy by attracting resistant material to the bi-metallic junction. This is the most important area of the engraving since excessive undercutting starts a little below this depth. The self banking etching process therefore utilizes two of the bi-products presently wasted. The first is the e.m.f. developed in the oxidation reduction reaction, the second is the residue from the expended etchant.

This, then, is the theory underlying the self banking etching development, but the step from theory to practicality is seldom, if ever, an easy one. To be of any importance to the engraving industry, the process must be simple, economical and foolproof. To meet these requisites, we have had to design a machine at a reason-

able cost which would accommodate a limited volume of the etchant and a standard size engraving plate. In this manner, one engraving is made from one package of etchant. The spent etchant is dumped and the machine is ready for a fresh start on another plate. The advantages of such a procedure are obvious. The start of each engraving is made from the same place, this means that in a given time and at a given temperature the results of engraving will be the same from plate to plate. The etchant is more profitably used on a package to plate basis than can be realized in attempting to chemically adjust a large volume of etching solution after each plate. The variables have been limited to the zinc breakthrough, temperature and time.

The procedure used at the present time to make an engraving by this process is to give the conventionally printed bimetallic plate a first bite in the nitric acid solution used for zinc etching. This is necessary because the self banking etchant will not attack the zinc, and to promote the cell action, the magnesium base metal must be exposed. The plate is then subjected to a light spray of the self banking etchant solution. The length of time the plate is exposed to the etchant and the temperature of the etchant determine the depth and character of the engraving. The etchant is made up in 5¾ lb. packages which is sufficient material to make 2½ gal. of etchant solution when dissolved in water. This volume of solution has been found to be sufficient for approx. 3 sq. ft. of an average combination engraving plate. The operating temperature of the etchant solution is determined by the nature of the work being engraved. Halftone work is generally run higher than line work and temperatures of from 60 deg. to 100 deg. F. have been used with varying degrees of success. From 75 deg. to 85 deg. appears to be the best temperature range and the etching rate at 80 deg. F. is in the neighborhood of 0.001 in. per min. Commercially acceptable engravings have been produced in depths of from 0.020 in. to 0.035 in., although undercutting has been reported below 0.020 in.

In any event, a great deal of work has been done and a great deal of work has yet to be done to improve and accelerate the process. We feel, however, that this approach to the chemically etched engraving will be the most fruitful. To insure its prosperity we must venture slowly and cautiously with constant attention to the counsel of the practical engraver.

The ABC of OFFSET

For Letterpress Printers

Series Two

By George Jos. Lenzer

XXV—STRIPPING HALFTONE COLOR POSITIVES

FOR stripping halftone color positives there are two basic procedures, The master layout and the blue glass or blue print processes. Each has its own advantages and disadvantages as well as variations.

Which method to be used is determined by one of several factors. (1) Plate size, (2) Production time, (3) Frequency of use, and (4) Storage. In either instance register is of prime importance.

Plate size may be influenced by the job size, number of printing images required, whether exposures will be made in a vacuum printing frame machine, or by photo composing.

Production time will establish whether one or more stripping supports will be required for rapid changeovers from one color to the next, the feasibility of double printing or masking for burnouts, and the exact procedures to be followed throughout.

Frequency of use determines the method of stripping, whether it is to be permanent or temporary and whether the stripping base support be rigid as with glass, or flexible as with plastic.

Storage, as a factor, is influenced by plant facilities. Whether possible glass breakage can be risked in event of a reprint or whether plastic films can be maintained dimensionally stable for reprinting purposes during storage, are factors of individual concern to each plant.

Master Layout Method

In this method a master layout is drawn on a sheet of white paper, the same size as that of the finished, printed sheet. The layout to include all register marks, cutting marks, dimensional corner marks, boundaries, margins, guide and gripper edges, locations for all comprising elements of copy, headings, illustrations, etc.

For contact printing in a vacuum printing frame, individual sheets of clear acetate or Vinylite film, slightly larger than the printing plate, are provided. One for each color, double print and/or burnout mask if needed.

The master layout and the subsequent flat assemblies must be wrong reading (right to left), because our printing plate will need to be right reading, from left to right.

Where plastic based flats are to be utilized in a photocomposing machine, a mounting glass must be provided upon which master register marks are established and drawn. These marks to assure accurate placement and positioning of film based flats, in preparation for exposure in the machine.

In this latter instance, care in making the flats must be observed to the nth degree of perfection, because of the danger of film distortion during multiple exposures in the photocomposing machine. The comment made here must not be confused with stripping directly upon a glass support, to be described later under the title of Blue Glass Stripping.

Procedure

With tabs of self-adhesive tape, the master layout sheet is securely fastened to the glass top of the stripping table. By accurate measurement, allowing for the gripper, a base line corresponding to the plate's edge on the gripper side will be established on the table top glass. This line is not drawn but is indicated by two or more tabs of red self-adhesive tape or by small pieces of cardboard which are fastened to the glass. The side guide and vertical center lines are established by following the same procedure.

Small pieces of cardboard are best for this purpose because they serve as stops for quickly positioning the sheets of acetate or Vinylite film to be used as base supports for the assembled flats.

Having completed our operational setup we can now begin to assemble the various color flats. One sheet of film (acetate or Vinylite) is positioned over the paper layout with its edges against the cardboard stops. The film is then securely fastened to the table top glass with tabs of self-adhesive tape.

Using a special plastic drawing ink, the register and center marks are now drawn on the film base. With all indicated areas of the master layout clearly visible through the transparent film, it becomes a simple matter to accurately position and securely fasten the several elements comprising the specific flat assembly. It is advisable, however, to make the first flat so as to contain the color positive with the greatest amount of overall visible detail. All positives of the same color designation comprising the flat, including all individual register marks, are similarly placed and fastened into their respective positions with clear transparent self-adhesive tape.

Each tab of adhesive tape and all register marks within the work area of the flat should now be encircled with a fine, irregularly drawn black ink line.

These circles enable the platemaker to locate these objectionable spots quickly when staging the plate prior to the developing operation. Red or black tapes should be avoided, because the platemaker (when staging the plate) may mistake the image of the tape as part of the positive assembly. Failure to stage out such a defect may result in job spoilage because its eradication after deep etching the plate can be difficult, if not actually harmful to the plate itself.

Having carefully positioned and secured all elemental positives of the assembly to the supporting film base, we can leave the flat and the layout sheet firmly attached to the table top where they will serve as master for the assembly of all successive color flats.

Treating each successive color flat individually, we position the next film base support over the master assembly and proceed to place and secure all related positives into position, in close register with the elements comprising the master.

Extreme care must be exercised in drawing in the register marks on all subsequent color flat assemblies and the same rules governing assembly of the master flat must be adhered to.

Upon completion, each flat is identified by lettering with pen and ink, along the gripper or side guide edges outside the work area or paper limits, the job number, name and color designation in addition to information pertaining to the specific job. This information when processed on the printing plate will provide the necessary identification for that unit.

Advantages

Under uniform circumstances, conditions and with proper facilities, flats of this kind are easily stored and filed, being always available for reprints until such time as the job is cancelled out or killed.

Disadvantages

Danger of distortion due to atmospheric change is a real disadvantage in event a reprint is necessary. To remake one plate may require the remaking of an entire set in order to assure close register throughout, except where dimensionally stable films and bases are employed.

Even though the dangers of shattering breakage is remote, possibilities of damage by folding, rolling or other mishandling is ever present.

Because static electricity has such a great affinity for dust, lint and other foreign matter, this can be considered to be the most costly disadvantage of all. Magnetically held foreign matter between positive and supporting base or upon the surface of an assembly can cause undetectable pinholes and other defects, not discernible until the printed impression is subjected to inspection. Hence the need for extreme cleanliness and good housekeeping at all times and during all operations, *i.e.*, cleaning, mounting, etc.

Blue Glass Method

As with any other stripping process, a master layout or flat must be assembled, containing as many detail elements as possible. In this method, the master assembly can be composed of different color elements when they contribute to an increase in overall detail and afford better registration facilities. This means the inclusion of body type, headings, background tints, ornamentations and borders or any other elements making up the completed job.

The more complete the master assembly is, the better will the blue glass be. The term "blue glass" can be applied to the supporting base whether it be clean uncoated glass or plastic, or whether it be photographic plates or films.

What Blue Glasses Are

From the foregoing statement it is evident that there are more than one type or kind of blue glasses, each of which is produced in a different way. In every instance, blue glasses are produced photographically.

Differences in the blue glasses are due primarily to the wide range in plate sizes and platemaking facilities and procedures.

The most common type of blue glass is one in which the glass plate or plastic sheet is coated in a centrifuge whirler. The coating, commercially procurable, has a blue dye incorporated in the powdered mixture which is water soluble. Coating the glass or film is similar to coating the metal printing plate.

When the coating is thoroughly dried, the glass base is transferred to the vacuum printing frame. The master layout flat is then placed in direct contact with the coated base and with the frame closed, exposure is made to the light of an arc lamp.

All areas of the coated surface exposed to the action of light are light hardened and rendered insoluble to water. After exposure, the blued glass base is subjected to a water bath by which all water soluble portions of the coating are washed away. The resulting blue and transparent image provides the stripper a permanent, dimensionally stable image to which all necessary negatives or positives are easily registered and attached.

Another method is where the coating is prepared in the shop. The coating is generally a mixture of bichromated albumin and glue. This coating, too, is applied to the base in a whirler and is partially heat dried or baked to the surface.

Exposure is made as described above in a vacuum printing frame. During exposure, light hardened areas are rendered insoluble in water.

After exposure, the plate is subjected to a water bath by which all soluble areas are washed away. The resulting colloidal image is dyed a desirable tone of blue or any other color for that matter. This means that certain portions may be dyed blue to serve as a register key for the stripper, while other selected areas may be dyed black to serve as a permanent positive or negative image for the platemaker.

A third method is one in which a Diazo dye coating is employed. In this method, during exposure to light, the exposed areas are rendered inactive. By passing the exposed base through a fume box or machine, the unexposed areas of the image are subjected to the fumes of ammonia or some other developing chemical which brings out the blue color.

Photographic Plates or Films Method

Use of photographic plates and films afford at least two methods by which blue glass images can be obtained. The first of these is the Ektacolor or similar photographic color processing. Here the unexposed areas of the photographic emulsion is rendered insoluble in water, while the exposed or silver image is bleached out and removed from the base under a bath of hot water. The resulting reversed image of clear gelatine is then dyed to a desirable tone of blue.

If desirable, certain other areas may be individually dyed black or red, depending upon need or requirement.

In the second process a salt replacement is involved. Here the silver metallic salts making up the visible image, are destroyed and are replaced by metallic salts of another kind. This is accomplished through chemical manipulation.

By further chemical treatment and development, the metallic salt image is converted into an image, blue in color much on the order of the conventional paper blue prints used in industry.

Contact Printing Exposure

Advantages of the light sensitive photographic plates or films in the production of blue glasses rests in the fact that exposure may be made to original art work, in the camera or by contact printing exposure to an assembled master flat.

Whether the blue glasses are coated in the shop or whether photographic films or plates are used, we see that each unit is a permanent image of the master from which it was made. This makes it possible for any one individual blue glass to serve as a key mounting glass for all colors of a job by interchanging positive films between the several exposures in platemaking.

Disadvantages

The greatest disadvantage of using glass for the blue image is the ever present danger of accidental breakage and cost of replacement. Especially is this true when 52 or 64 in. sheets of plate glass are involved.

In all instances where glass is used, safe storage is a major concern and can be a real disadvantage without proper storage facilities.

Blue Glass Stripping

The blue image on glass or plastic film provides something for the stripper to latch onto, particularly on glass. Each image is permanent and affords the stripper a double check for each individual piece of film he has to work with.

If any one positive film has gone out of register by distortion at any time during stripping operations, the discrepancy

(*Continued on Page 102*)

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Magill-Weinsheimer

(**Continued from Page 50**)

proposed plant. Before the municipality granted the building permit for the structure the firm met the requirement to lay out the street, 600 ft. long, and deed it to the municipality.

In interviews which the writer had with Kruft in his office at the Wabash Ave. plant, and subsequently on the site of the new structure, plans of procedure were explained and modern construction methods were described and demonstrated. For instance, concrete curbs for both sides of the 600 ft. long and 30 ft. wide street were specified to be 2 ft. high and 12 in. wide. They were laid by machine within a two day working period.

Building Construction

Side and back walls of the one-story structure are 1 ft. thick. Materials used for side and rear elevations consist of 8 in. "Weigh-lite" concrete blocks, outside of which are 4 in. face bricks. Most of the front elevation is made up of concrete block and has in front of it for decorative purposes selected Tennessee Crab Orchard natural tinted stone, each piece of which was hand cut and positioned by a skilled stonecutter. The wall outside of the art department and its windows are of "pyelaster" slant design to avoid glare, giving the artists within whatever benefit may be derived from North light. The arrangement adds beauty to the front elevation.

Steel pillars throughout the structure are of such slight width and breadth as to make them inconspicuous. Each 12½ ft. pillar is erected on a foundation consisting of a base, 8 ft. sq. by 1 ft. thickness of concrete, upon which is a 2 ft. sq. mass of concrete, 4½ ft. high. The concrete floor throughout the plant is 8 in. thick laid upon a 6 in. depth of bank sand. Pillars throughout the plant are positioned so that each bay (there are 90 of them) has an area of 36 ft. by 40 ft.

The ceiling is 12½ ft. above floor level. Above the ceiling is a 2 in. layer of fibre glass which has value as insulation. Above this is a 3 in. deck of reinforced gypsum, above which are four layers of felt on top of which, finally, is pitch and gravel. Improved methods in building the roof included use of machines in spreading the felt and laying 238 T. of gravel stone and 95 T. of pitch. Kruft said materials used throughout the building are of non-combustible substance because of which insurance rates are low.

Office Arrangement

In the plans being worked out, offices of the company are in the part of the structure facing Touhy Ave. They are laid out so that personnel of various departments who have occasion to confer frequently about estimates, sales, and production procedures are within speaking distance of each other. From this conference center, desks and private offices radiate into areas occupied by personnel constituting various departments. Top executives, A. J. Weinsheimer, chairman of the board and Harry J. Leahy, president, are nearest to the Touhy Ave. entrances. Adjoining are offices of other executives.

Art Department

Twenty-two artists get the benefit of the North light at the East end of the building. Likewise, executive offices are provided with maximum natural light. Windows may be kept closed continuously because of the air-conditioning, humidity-control system which regulates atmospheric conditions in offices, the plate-making, and offset press departments. In other departments the automatic ventilating system provides for change of air seven times an hour.

Lighting System

The lighting system consists of a total of 970 fluorescent lamps with white porcelain reflectors. These are distributed in the plant to provide 75 foot candles at the work level in composing and pressrooms, and part of the large bindery; 50 f.c. in executive offices; 30 f.c. in receiving and shipping departments and 10 f.c. in storerooms.

(*Continued on Page 82*)

Photo by Constance Bannister

"Why . . . they wouldn't think of using anything but Burgess Mats!"

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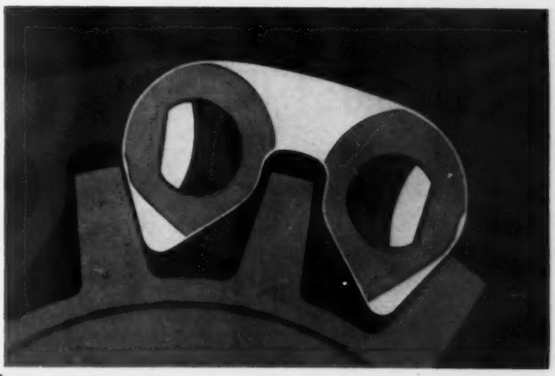

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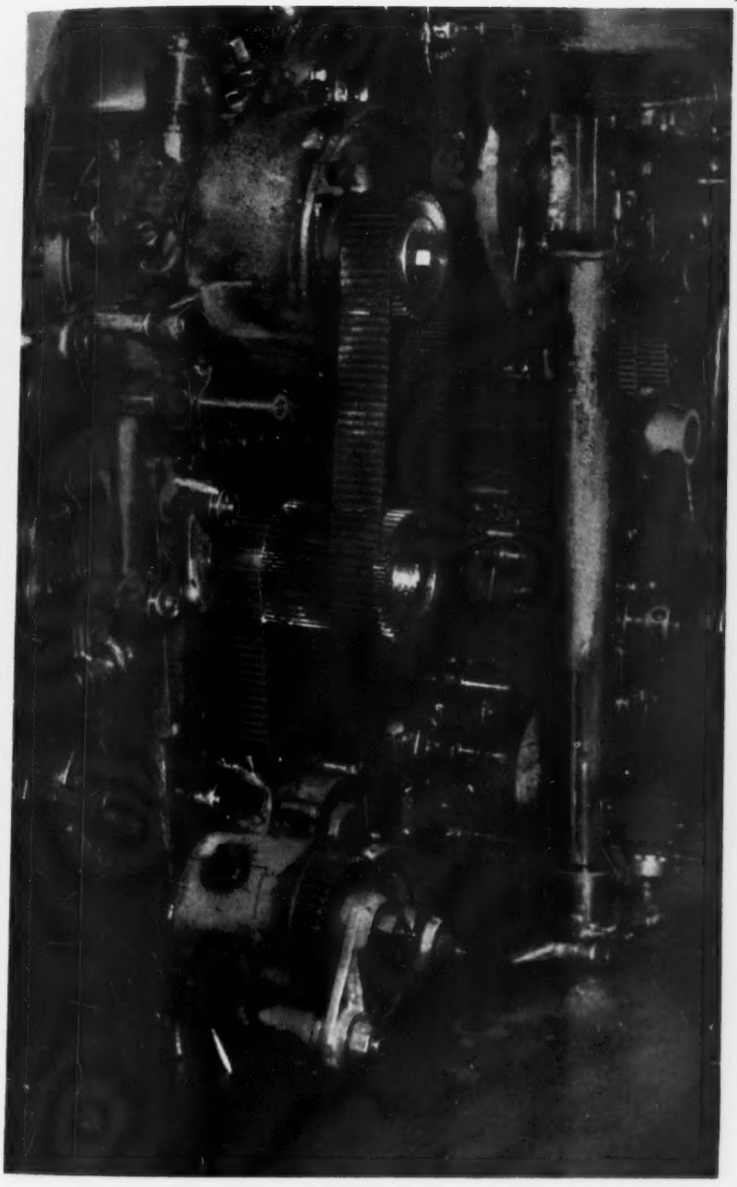

One of eight press units using Ramsey Silent Chains to operate the inking rolls at the St. Petersburg Times. Lubricated only by a single drip feed.

Says G. Wayne Allyn, Chief Machinist, St. Petersburg Times, Florida

"It has also removed the surge from the press which was noticed at the moment the ductor or fountain rollers made contact with the ink drum. And, to us the most important of all, was the removal of all noise, created by the train of fine gears which your chains and sprockets replaced."

More and more newspapers throughout the country are utilizing the smooth, slick rolling action of Ramsey Chain Drives to assure cool, quiet, almost frictionless power transmission in their pressrooms. No matter how you figure it—from a comparative price standpoint, the simple lubrication feature, or the years of troublefree performance, Ramsey Silent Chain Drives are your best bet.

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Electrical Power

Electrical power is derived from high tension wires strung on poles on Commonwealth-Edison Co. property immediately to the West of the Magill-Weinsheimer property. These wires are tapped near the Southwest end of the factory building (the printing plant) and the high voltage power is fed into a detached structure housing the transformer equipment which reduces the voltage power from 32,000 v. to 480 v. for use on machines, and 120 v. and 110 v. for lighting and other purposes. Cost of electrical wiring and connections will exceed $100 thousand.

Heat and Air Control

An automatic oil burning boiler and air compressors are housed in a walled-in room in the middle of the manufacturing building. This room with its air and heating control devices is 35 ft. by 41 ft. with its floor level 4 ft. below the level of the floor of the surrounding factory.

Water provided by the municipality comes from Lake Michigan, thus insuring a plentiful supply. Gas is supplied by the Northern Illinois Gas Co.

Surrounding the boiler and air control room are various production departments.

Receiving Department

The receiving department is at the Southeast corner of the main structure and the shipping department at the Southwest corner. Each will accommodate two 32 ft. trucks at the same time, thus assuring non-delay handling of incoming and outgoing materials.

Automatic Leveling Platform

Automatic leveling platforms which adjust themselves according to loading or unloading levels of auto trucks backing to either platform expedite the handling of loads. Approaches to the respective docks or platforms are 26 ft. wide and 49 ft. long. In operation, a truck delivering paper or other raw materials backs down the incline, strikes a bumper which releases counterweights. Steel plates are then automatically released which adjust themselves in relationship to respective levels of the truck and the dock. The unloading operation then proceeds by manpower.

Paper-Raw Materials Storage

Adjoining the receiving department to the North, on the East side of the building, are storage rooms for paper and other raw materials. West of these are the offset and letterpress pressrooms to which contents of the storage rooms in quantities as needed are delivered to the four-color and other presses. Each of the pressrooms occupies about 20,000 sq. ft. floor space, the offset pressroom as previously stated being fully air conditioned and humidity controlled.

Plans to install new presses and other equipment in the new plant have been made but at the time of inquiry, the management was not ready to divulge details. However, strong foundations for the largest four color presses in each of the two press departments have been provided. They consist of concrete walls, 2 ft. thick, upon which the frame work of the press rests. An open pit, 4 ft. deep, permits pressmen and assistants to get under the press conveniently, at will, to make adjustments. The largest of the pits is 27 ft., 7 in. long, and 6 ft. long. Kruft explained that since it costs management lots of money to operate such a big press, the pit, beneath each which permits workmen to make adjustments, is a good investment.

The letterpress pressroom is North of the power and air control room while the offset pressroom is South of it, being in the area between the receiving and shipping departments.

Adjoining the offset pressroom to the North is the platemaking department with cameras, and processing equipment occupying about 12,000 sq. ft. of floor space.

The lockup department for letterpress operations adjoins the letterpress department.

Products from both pressrooms flow into the bindery which runs along the West part of the plant. Thus when bindery operations have been completed the products are sent to the adjoining packing room, thence to the shipping depart-

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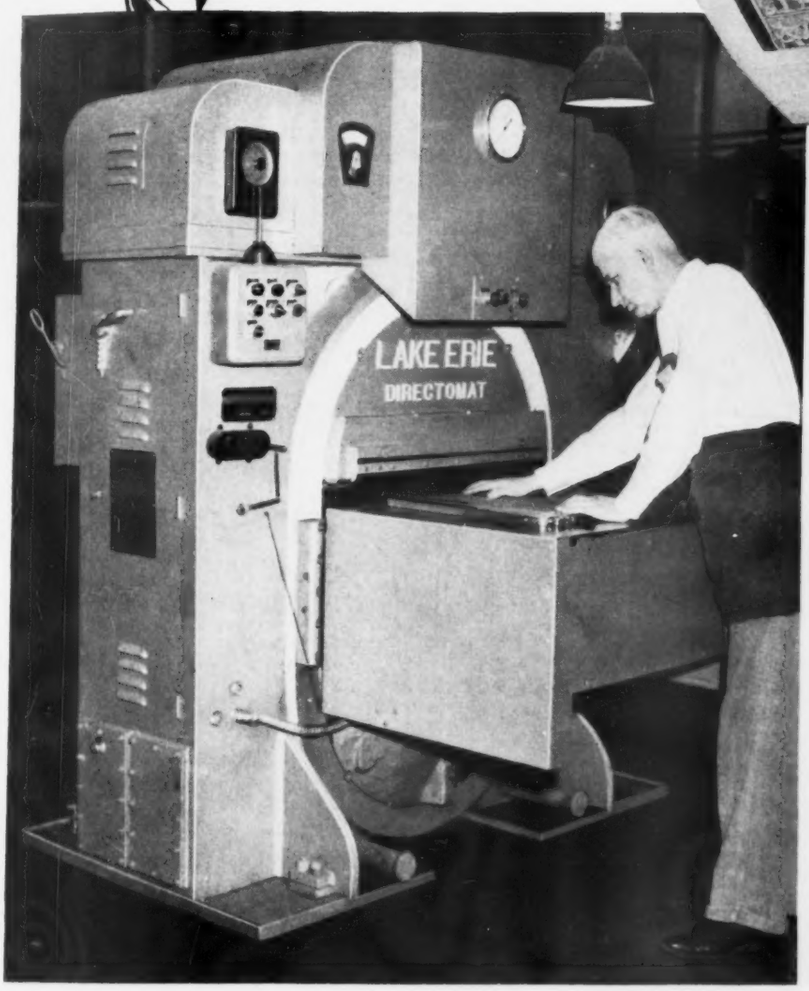
say these Famous NEA Comic Stars



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adds HERBERT W. WALKER,

Vice-President & General Manager of NEA Service, Inc.

"With our Lake Erie Directomats," Mr. Walker relates, "we obtain the finest possible reproduction of NEA comics for our clients . . . the 1200 daily and Sunday newspapers we serve." This experience of Mr. Walker is shared by the leading newspapers in R.O.P. color — 7 out of 10 leaders use Directomat direct pressure mat making equipment for their color mat production. Nearly 300 Directomats are now serving newspaper and commercial plants. Let us tell you how the Lake Erie Directomat may serve you too.
Send for Bulletin 349

*NEA's first Directomat saved on production time and performed so well on four-color work that a second Directomat was recently installed. The new Directomat turns out 800 sets of daily comic strip mats every day.

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ment and out of the building to the destination specified by the customer.

One of the important departments is the quality Control Room which will occupy part of the section near the bindery. A cafeteria and a first aid room are among welfare provisions.

A detached building some distance away from the plant has been provided for storage of naphtha and varnish. Tanks with capacities for 550 gal. of naphtha and 500 gal. of varnish have been placed underground within the building. This detached building is termed "The Safety Room" by the management.

Plans for landscaping outside areas surrounding the building have been contracted for. The curved driveway approaching the main entrance with the background of the front elevation of the building and its decorative stone will make the view of the building attractive by day or night. The canopy over the main entrance will be 40 ft. wide and 16 ft. deep, and at night will be brilliantly lighted. The building is designed to be a mark of distinction to convey to the tens of thousands of persons who pass by daily in railroad trains, and in autos traveling along Touhy Ave. and Edens Expressway that the Magill-Weinsheimer Company is a producer of fine advertising printing in color by both letterpress and offset processes.

Front Lockup

(Continued from Page 43)

condition holds true on the right hand side. The mold cannot advance any farther because it is already banking against the matrices in the center. So naturally it is open on both ends and that is where one begins to see the metal escape next to the mold cap, the mold body or even the liners. Here also, you can see where matrices, even though the depth of punch is correct, would result in high and low letters.

On the right hand side of the mold (Fig. 2) one matrix is tight up against the mold. Since the height of the mold is 0.875 in. and the depth of punch in the matrix is 0.043 in., we have a total overall height here of 0.918 in. which is correct for type high.

However, let's look at the matrix to the right. This is in a position where it is banking against the banking bar *E*. It is away from the mold a considerable distance. Naturally, when the cast takes place, this letter will be much higher than the letter next to it. Thus we see, even though there is absolute perfection in punch depth in the matrix, high and low letters will occur when the molds are warped. The front lockup condition from *E* on is correct; *E* banks against *F*, and *F* banks against *G*, so we are only concerned here with straightening the mold. When molds are warped you can usually tell it by metal accumulations on the front. Or you can tell it by putting a good toolmaker's straight edge along the front edge of the mold cap or the mold body. The only cure for a condition of this kind is to have the mold straightened. No service man can straighten a mold on the job. Incidentally, if the molds have been injured or measure under 0.875 in. through the body, it will not do to have them straightened. If they are under sized, the same results cannot be secured from more than one mold in the same disk.

Out-of-Parallel Lockup

Now let's see what may happen on the front lockup. In Fig. 3 we see a rather unusual condition whereby the mold is touching the left hand jaw but it is quite a distance away from the right hand jaw; in simple words, vise cap is not parallel with the mold. In this Fig. 3 the mouthpiece is making a tight lockup against the mold. The mold is perfectly straight but something has gone haywire. What is it? Maybe the right hand vise locking stud *X* (right) broke and a new one was put on. Maybe there were too many washers put on the stud at the point marked *X*. In actual practice we more often find where a machinist, in discarding one of these studs, will throw it away with all the washers that the factory put there and instead of the vise being out too far on the right hand side it is in too far. We have contact in this case on the right hand side but we do not have it on the left hand side. If a good front lockup is to be obtained it will be necessary to bring the right hand side of the vise in, or more washers will have to be put on the left hand stud at the point marked *X*. The question is, which shall we do? The answer is to allow the first elevator slide to rise to the delivery position and see if the front jaw and banking bar *E* are in line with the front rail of the delivery channel. If they do not align it is a sign that the entire vise is too far out (or in) and washers should be removed (or added) to secure proper alignment. Washers may then be added (or removed) to the left hand vise locking stud to bring the vise frame parallel with the molds. To test for parallelism, drop the first elevator to the vise cap, bring the mold disk forward by hand and push each jaw back anf forth to check for equal pressure against each

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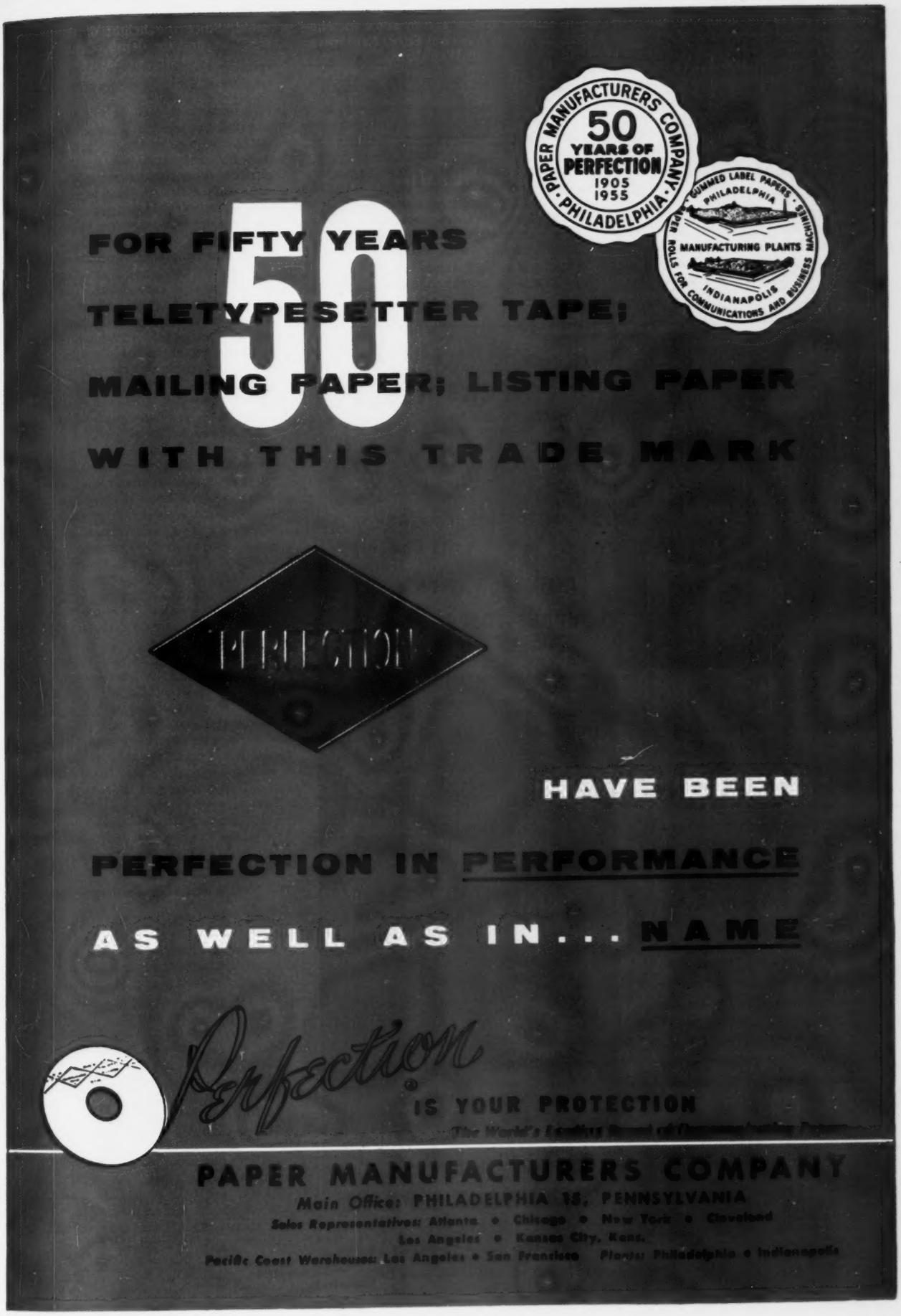
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jaw. After the proper alignment of the jaws with the mold is obtained, raise the first elevator to transfer position. You should just be able to see light between the banking bar *E* and the transfer bar in the first elevator slide guide. If not, adjust the guide for this clearance, after driving back the dowel pins, if necessary.

Replace Those Washers!

The washers (W181) shown at *X* are made in thicknesses, ranging from 0.002 in. to 0.010 in. Whenever a broken stud is removed, first try using the washers from the old stud on the new one. Usually they will be OK, but it may be necessary to remove or add washers due to permissible manufacturing tolerances on the stud. So always make the check for parallelism by dropping the first elevator on the vise cap, bringing the mold disk forward, and checking the pressure on each jaw. There must be parallelism between all elements involved in the front lockup. Now, if we have these things pretty straight in our minds, there are a few other points I would like to tell you about front lockup. As I have already said, anything that would interfere with each of these elements making perfect metal to metal contacts with each other would destroy a perfect front lockup. We must look for a few more conditions which have a bearing on these parts fitting closely together.

Check After Installing New Jaw

Supposing we put in a new left hand jaw and the jaw block is rubbing against the front surface of the slot in the vise cap, and the left hand jaw would be held closer to the mold and possibly away from the banking bar *E*, then we can readily see where we could not get a good lockup at the center or near the left hand jaw, because of a space which should not be there in any event. The same could happen on the right hand jaw. Now these vise jaw blocks have a considerable amount of play in them. They should have this play. Remember, when the mold disk advances to slug ejecting position we want the mold to bank against the banking blocks which are mounted above and below the trimming knives. When the mold is banking against these two blocks the mold which happens to be in casting position at that time should not bank against either the right or the left hand jaw. If the mold in casting position were banking against these jaws, then the mold in ejecting position could not bank against the banking blocks. Now, how is it possible to prevent banking at this point? That is automatically taken care of. When the machine is in ejecting position, the front jaw *F* and the banking bar *E* are up in transfer position. At this time the left and the right hand jaws can move forward quite freely. They should be absolutely free in ejecting position when the mold containing the slug to be ejected is against the banking blocks. A simple test can be made for this condition. With the machine in normal position, push down on the vise automatic rod, pull the mold slide forward until the mold in ejecting position is tight up against the banking blocks, then slide left hand and right hand jaws with your hands. If they are free they are right. If there is binding, there is some dirt behind the jaw block or where the jaws are being held against the mold when they should not be.

Mold Banking During Ejection

Another important element enters into the front lockup. When a mold in ejecting position is banking against the upper and lower banking blocks the mold in casting position should not bank against the vise jaws. Now, let's assume that the banking blocks above and below the knives are too high. This is hardly probable unless someone has put some shims under the banking blocks. But let us assume they are a little bit too high and that when the mold disk advances to casting position, the mold in ejecting position strikes the banking blocks above and below the knife, before the mold in casting position can make contact with the matrices. When this occurs the pot tries to press the mold into contact with the matrices and spacebands while the banking blocks above and below the knife are trying to hold the mold disk back because they are too high. We have one element fighting another. This is definitely wrong but it has happened and can happen if you are not familiar with the fundamen-

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tals of front lockup. It may be truthfully said that the right and left hand jaw on any typesetting machine moves forward and backward depending on what is going on at the time. They move backward when they are pushed backward by the front jaw and aligning bar when the first elevator descends to casting position; and they also hold the mold in ejecting position absolutely clear and free of the banking blocks. Now when the mold comes around to ejecting position and the banking bar *E* and the front jaw *F* (Fig. 1) are no longer there but are transferring matrices in upper position, the left and the right hand jaw are permitted to move forward so they are not held tight against the mold in casting position. This permits the mold in ejecting position to make firm contact with the banking blocks above and below the knives. This is as it should be. Any deviation is going to result in trouble one way or another, not serious at times, but enough to bother. If a mold in ejecting position does not make firm contact with the banking blocks above and below the knives, then there is a spongy condition so that when the ejector blade strikes the base of the slug and starts to push forward instead of pushing against something solid as it would if the mold were banking against the banking blocks, it springs the mold disk forward until the mold disk finally does allow the mold to bank against the blocks at which time the slug lets loose abruptly from the mold.

Setting Gibs Correctly

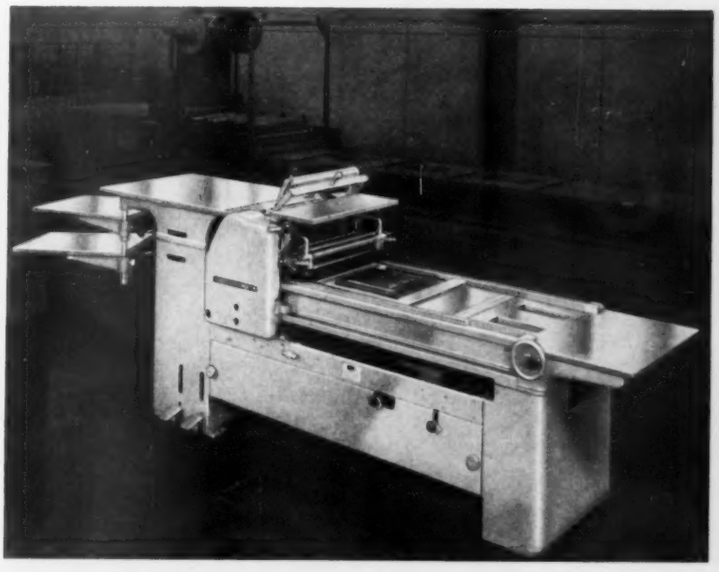
Here is another detail frequently misunderstood. Note the first elevator slide gibs (Fig. 1). They contact the slide at surfaces *Y*. The left hand gibs are adjustable sidewise. Don't set them too close. If you do, the first elevator slide is pushed backward so that the front jaw *F* cannot bear against the vise cap *G* and again we have a spongy lockup. All elements must be tight. So set the gibs so that under lockup pressure from the rear you can get a piece of Cellophane or feeler gauge 0.001 in. to 0.002 in. thick between the gib and the slide at the point marked *Y*.

Mold Cam Eccentric Pin and Roll

This brings up the last element. This is the correct setting of the mold cam eccentric pin and roll. We all know that when the mold disk moves forward the first time and the roll is on the first shoe back in the driving gear the front face of the mold will come to about 0.010 in. from the matrices and the jaws. This test must be made with the first elevator back jaw removed and the front jaw down in the vise cap recess to support the left and right hand vise jaws. Now, let's assume that the eccentric is set wrong and the mold is not coming far enough forward to make contact when the pot comes forward and the roll is on the second shoe. Then we have a condition whereby the pot is trying to press the mold into contact with the matrices and spacebands while the mold cam eccentric lever and roll are trying to hold the mold disk away from the matrices and spacebands. Here also one element of the machine is fighting another. The setting of the mold cam eccentric pin and roll on a machine is an important one. It should be checked at intervals to maintain the proper amount of clearance. Accurate slugs are dependent on adjustments such as have been discussed. Variation in letter height is almost wholly dependent upon a perfectly straight mold banking bar and a good front lockup from front to back. Metal accumulations on the front of the mold eventually also result in metal accumulations on vise jaws, spacebands and broken down side walls on the matrices.

LET OTHERS READ IT

The growing demand for copies of *Printing Equipment Engineer* makes it impossible to fill requests in every case. As a regular recipient, won't you please let other executives, as well as any promising future executive employees in your plant, read this copy when you are finished with it?



Vandercook Power 219 *with the adjustable bed—is shown here equipped for proving on acetate or other transparent materials.*

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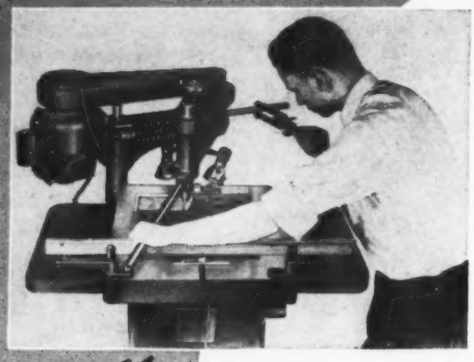

Hammond
Radial Router

MODEL
R-4

The Hammond Radial Router has the good "feel" and sensitivity the operator needs. The radial arms are rigid but yet of light construction. The arms are operated by front and rear handles. The latter has a T-handle extension for convenient routing at the rear of the plate. The Hammond Radial Router is a *Good* router at a *Medium* price.

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Patents

For The GRAPHIC ARTS

Covering patents issued Dec. 7, 14, 21 and 28.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

MACHINE FOR GLUING BOOK BACKS

A glue-brushing-on operation is performed on the books as they are moving rapidly through the machine. This operation is performed and controlled in such a way that proper operation of the machine on books of different sizes is assured. Patent 2,697,236 by William W. McCain.

MAGNETIC CALIPERING DEVICE

For use on signature gathering machines, a magnet couple is used for normally overpowering the force of a spring to restrain it and prevent actuation of the mechanism which is operated by the spring as long as a predetermined normal condition exists under a feeler used for thickness of the signatures. Patent 2,697,281 by George F. Watson, assigned to The Christensen Machine Co.

•

Composing Room:

TYPOGRAPHICAL CASTING MACHINE

Quadding and centering devices of the type covered by patents Nos. 2,255,254 and 2,642,180 are made more efficient by a rotary cam and cam follower which are mounted on the main drive shaft. Such structure may be extended or depressed to relax but still keep the line squeezing pressure through the cam follower, avoiding too abrupt release of line. Patent 2,698,080 by Paul Hilpman, assigned to Mergenthaler Linotype Co.

•

Feeding, Folding, Delivery:

AUTOMATIC SHEET FEEDER

The feeder includes a conveyor table to which sheets of varying sizes and thicknesses are fed. The table is embraced by tapes in the form of endless conveyor belts, the upper runs of which extend lengthwise of table and constitute the direct supports for the sheets. Each belt may be replaced without dismantling machine. A novel and easily movable jogger is included. Patent 2,696,983 by Alfred Anderson.

SYSTEM FOR STACKING NEWSPAPERS

An automatic control system is responsive to the rate of paper flow and the passage of each group of newspapers of a preselected number through a counting zone to coordinate the operation of the conveyor, the stacking tables and the transfer table so that stacking and transfer of completed piles of papers is carried on continuously and automatically as long as papers are fed. Patent 2,697,388 by Kenneth H. Hansen, assigned to the Cutler-Hammer, Inc.

STACKING OF PRINTED SHEETS

This stacking method combats curling tendency in printed sheets and consists of inserting props under the forward corners of the sheets prior to the moment the reciprocable carriage's withdrawal leaves the forward corners unsupported. The props are withdrawn after the sheet has dropped onto the pile, and before the carriage has again advanced to deliver another sheet to the pile. Patent 2,697,602 by Peter Van Oudenaren, assigned to Lont and Overkamp Publishing Co., Inc.

PAPER STUFFING MACHINE

The machine comprises two units; the first unit feeds the outer section of a newspaper to a conveyor with the main fold extending downwardly. In being carried forwardly by the conveyor, the papers are controllably spread to receive, in timed relation, an inner section delivered from the next unit. Patent 2,698,174 by Robert E. Deuel.

SHEET FEEDING MECHANISM

For use with cylinder printing presses, the mechanism operates without overlapping feed, thereby permitting the feed table to be positioned more closely to the impression cylinder. The same suction which picks up the sheet from the feed table feeds the sheet directly to the impression cylinder. Patent 2,698,175 by George S. Rowell, assigned to The Chandler & Price Co.

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Miscellaneous:

METHOD OF PRINTING

Wet ink films on printed surfaces are protected by applying a continuous thin film of a transparent film-forming volatile coating solution. The coating is applied by passing the printed surface in direct, non-wiping contact with a solid contact surface wet with a thin film of the solution. Patent 2,696,168 by John P. Costello, assigned to Fred'k H. Levey Co., Inc.

Platemaking:

PLANOGRAPHIC PLATE AND METHOD OF MAKING

The plate may be formed by coating a surface of a cellulosic base with a solution which is essentially an aqueous dispersion of an alkali salt of a dibasic acid styrene copolymer, and insolubilising the same. An ink-receptive, water-repellent image is formed on the coating. Patent 2,696,783 by Douglas A. Newman, assigned to the Columbia Ribbon and Carbon Mfg. Co., Inc.

PREPARATION OF LITHOGRAPHIC PRINTING PLATES

The process eliminates scumming and provides for exposing to a line or half-tone subject a layer of a cinnamic acid ester of polyvinyl alcohol coated upon a zinc surface, then applying to the exposed layer an organic solvent until the cinnamic acid ester has been removed from the zinc surface only in the unexposed region and swabbing the layer with ethylene glycol monomethyl ether, or the like. Patent 2,697,039 by Lawrence E. Martinson, assigned to Eastman Kodak Co.

MACHINE FOR PRODUCING SCREENED RELIEF PATTERN PLATES

This machine produces on a plate a screened relief pattern from an image sheet and virtually eliminates the skill and technique previously required to produce half-tone engravings. It includes a plate supporting cylinder, a cylinder for the image sheet, an arrangement for moving the cylinders synchronously, a carriage with an electro-optical pick-up system, a carriage including a plate-deforming tool, and an arrangement for moving the carriages synchronously. Reissue patent 23,914 of 2,575,546 by John A. Boyajean, Jr., assigned to Fairchild Camera and Instrument Corp.

CLAMPING BAR

The bar is for holding lithographic plates to be grained on a rotatable drum. The bar is of inverted U-shape and is combined with a flexible tensioning rod. The arrangement is such that when tension is applied to tensioning rod, clamping bar is forced against drum along the complete length of bar to hold plate to drum. Patent 2,697,899 by Karl Wilhelm Elminger, assigned to Aktiebolaget Johnson & Borsell.

•

Printing Presses:

PRINTING PRESS DRIVE MEANS

This drive is for presses of the bed and cylinder type. The improved mechanism is so designed that the bed and relatively heavy slide to which it is driven reciprocate in opposite directions so that the inertia forces developed by slide and bed tend to cancel each other. Patent 2,697,398 by Willard M. Pollock, assigned to the American Type Founders, Inc.

OSCILLATING INK ROLLER

In oscillating ink rollers reciprocating in endwise relation, the rollers incorporate self-contained mechanism for actuating the reciprocating movement. This is accomplished by a speed reducing gear train by which, for every rotation of an outer roller shell, there is a partial rotation of sprockets of a sprocket chain, the length of which is several times the sprocket circumference. Patent 2,697,983 by Norman W. Taylor, assigned to the Harris-Seybold Co.

PATENT SEARCHES

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Battelle Progress

Progress in gravure studies undertaken during the next months by Battelle Memorial Institute was reviewed by the members of the technical advisory committee of Gravure Research, Inc., recently at an all day meeting in Chicago, and by directors of the group at a later session. The directors also outlined the research program to be undertaken by Battelle scientists until the directors' annual meeting in May.

Staging & Color Correcting

(Continued from Page 71)

New and Basic Approach

It is our understanding that with the new Ansco paper in which is combined the properties of the Kemart process, a new and basic approach has been developed. By way of superficial explanation, it may be said that the exposure of the middletone and more solid areas in the halftone is made with a very small camera aperture. This brings out the proper values in these tones but has no great detrimental effect on the highlight dot. Now, to get the proper highlight dot, the camera aperture is opened and the exposure is made with ultra-violet light. In this operation an excellent highlight dot is produced but the dot structure of the middletones and solids is not materially affected. In this way, it is reported, a true and undistorted range of tones that reflect the actual color values in the copy can be obtained, without the time consuming and expensive staging operation in producing process halftones. The skill of the etcher still is needed. If the objective of the new product is real-

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ized, the engraver can turn out a better product at considerably less cost.

Executives Enthusiastic

Results drew approval from John Copeland, *Star* and *Tribune* production manager, and members of the color team. Copeland and James Godbold, chief color photographer, reported the fluorescent paper was used for the color separation bromides for a five picture layout of St. Paul Winter Carnival activities involving closeups with skin tones, snow and sky areas, and crowd and street scenes with considerable detail.

Copeland and Godbold credited the new fluorescent photo paper with: (1) Producing separation prints of greater brilliance, making it possible for the engraving camera to capture a greater range of light tones while producing clearer and darker dark areas; (2) Saving time in engraving usually needed for staging and correcting color plates; (3) Producing newspaper stereo plate page casts with noticeably improved depth in the dot pattern of the lighter tone areas.

"The fluorescent photographic paper produces color separation prints of much better definition and greater range in color," Godbold declared, "and the improvement carries on through the engraving negatives and plates.

"Our work so far shows that the new paper makes possible much better dark tones while at the same time increasing the sharpness and clearness of the whites, and brings us much nearer to a full range of tones. I think we'll be able to do a much better job on pastel colors from now on, too."

Better Negative Definition

The halftone engraving negatives made from the fluorescent prints have such better definition and range of tone values that they cut to the very minimum the amount of staging and re-etching which previously has been necessary in the color engraving process, according to E. M. Jennison, *Star* and *Tribune* engraving foreman.

Most of the highlights and dark tones that usually have to be achieved with considerable handwork in the engraving operation now seem to be taken care of by the engraving camera, Jennison said.

What is A-K Paper?

Characteristics of the paper are described by Frank P. Adams, president of Kemart Corporation, as follows: It is a plastic base, dimensionally stable paper, with a fluorescent coating, over which is laid the silver emulsion and a protective coating of gelatin.

The emulsion is developed and fixed in normal manner, like other photographic papers. But the resulting prints have a fluorescent characteristic, and because of the plastic base, the prints are dimensionally stable.

No special processing or developing materials are required, except that the developing, fixing and shortstop solution must be, in themselves, fluorescent. Processing time is the same as for other plastic backed photo papers now in use.

Separation prints on the new A-K paper can be retouched in the normal manner, by mixing fluorescent liquid into existing retouch colors; or by use of specially prepared A-K retouching materials, which are matched in their visible gray scale to the fluorescence of the paper.

A quencher solution also has been prepared which can be applied to areas of the prints to quench the fluorescence and thus hold down the highlights of any or all of the colors.

The Purple Lights

The one piece of special mechanical equipment necessary for producing en-

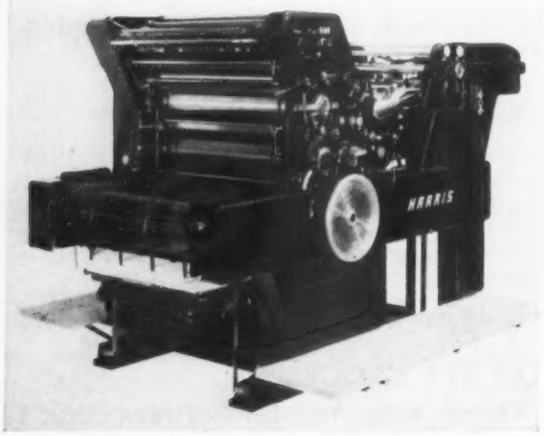
Technical Speakers at TAGA Meeting

Eleven speakers have been named who will deliver papers on a wide variety of Graphic Arts topics at the 7th Annual Meeting of the Technical Assoc. of the Graphic Arts. The meeting is scheduled for May 9-11 at the Somerset Hotel, Boston.

The announcement was made jointly by Papers Committee Chairman, Robert M. Leekley, Assoc. Research Director, Time, Inc., Springdale Laboratories Div., Springdale, Conn., and General Meeting Chairman, Merrill N. Friend, Plant Research Engineer, Spaulding-Moss Co., Boston.

TAGA President G. L. Erikson of Cleveland will preside over the Boston meeting in May. He is executive vice president of Braden-Sutphin Ink Co.

The speakers and the title of their talks are as follows: J. S. Rydz and V. L. Marquart, Radio Corp. of America, *Applications of the Neugebauer Equations*; H. E. Rose, Radio Corp. of America, *Adaptation of Electronic Color Correction to the Printing Process*; J. R. Bradford, U. S. Radium, *Atomic Energy in the Graphic Arts*; David Lewis, American Newspaper Publishers Assoc., *Dry Offset*; R. V. Shalvoy, Stecher-Traung Lithograph Corp., *Use of the LTF Inkometer in Printing Plants*; William H. Wood, Harris-Seybold Co., *A Review of Dampening Systems for Lithographic Presses*; J. G. Jordon, Time, Inc., *Application of Masking Theory to Letterpress Printing by the Electronic Scanner*; George Jorgensen, Lithographic Technical Foundation, *Graininess in Lithographic Prints*; Charles Borchers, Lithographic Technical Foundation, *Studies in Ink Transfer During Printing*; N. J. Beckman, Kimberly-Clark Paper Co., *The Measurement of Ink Drying of Letterpress and Lithographic Inks on Coated Book Papers.*



Model 128B Harris Offset Press—Harris-Seybold Co. is manufacturing a new offset press with feed roll register in the 23 in. by 30 in. size range, according to announcement by Ren R. Perry, vice president sales. The Harris Model 128B is identified by its nominal size of 21 in. by 28 in., but will handle a sheet up to 23 in. by 30 in.

Whether a printer should operate a 23 in. by 30 in. press with feed roll register or tumbler gripper register will depend primarily upon the type of work the firm ordinarily handles, Perry pointed out. Shops specializing in short-run, quick back-up, work-and-turn work will continue to find the tumbler gripper machine effective for their purposes. However, some plants handle these quick back-up jobs without specializing in them. Their real specialty is long run, hairline register work, for which a feed roll register press offers specific speed and register advantages, continued Perry.

The Model 128B will be equipped with the standard Harris feed roll register system, including graduated gauge pins. On jobs where needed, these allow the print to be controlled at the tail of the sheet for more precise register. Maximum speed will be up to 7500 sheets per hr. Introduction of the feed roll registering system requires the Model 128B to be slightly longer than the 128A, although height and width will be the same. The press will be 10 ft. 1 in. long, 7 ft. 2 in. wide and 5 ft. 8 in. high, with an estimated weight of 7350 lbs.

A roll-back water fountain to facilitate access to the register system as well as removal of the dampeners for cleaning, will be standard on the new Harris 128B. For fast set up of most stocks, the operator uses center separation, but he can switch quickly to corner separation using combers when running difficult stocks. For more details, please mention PEE No. 437 in your request to *Printing Equipment Engineer*.

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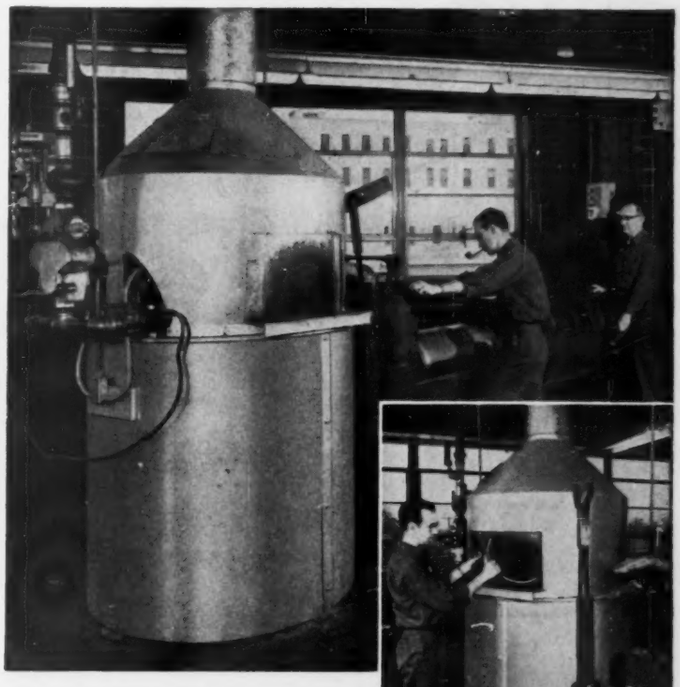

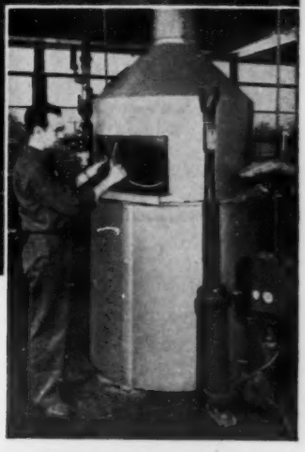

Kemp Stereo type Pot in operation at The Daily Tribune, Royal Oak, Mich.

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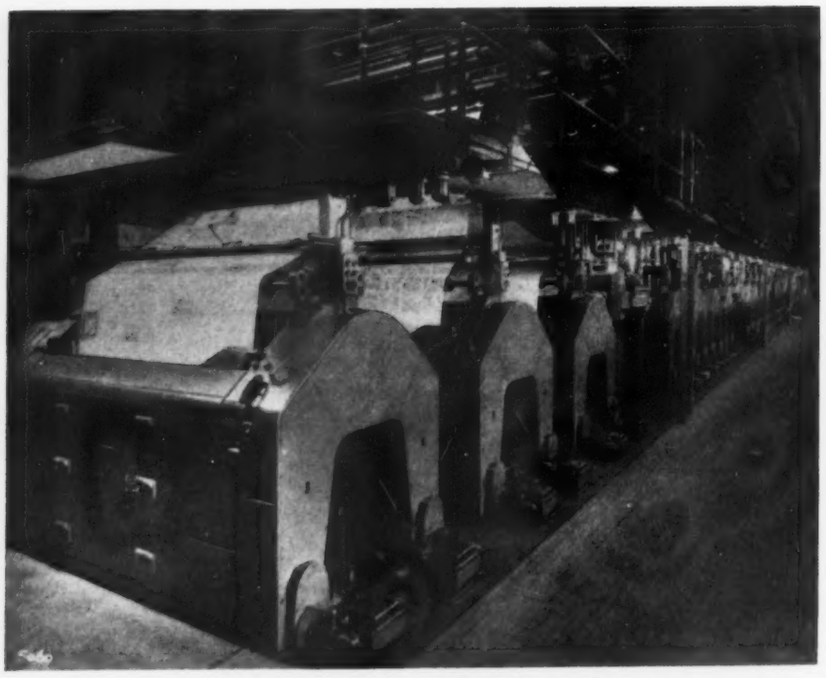

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graving negatives from the fluorescent photo paper is a set of purple lights, which Kemart rents to licensees.

After the engraver has made his normal arc light exposure, he must give the fluorescent copy a 1 min. exposure with the purple lights, to pick up fluorescence in the copy.

Handling Negatives

Once the engraving negatives are obtained, the engraving and handling process is exactly the same as with negatives shot from conventional photo paper —except that the staging and re-etching is reduced to a minimum, according to Jennison.

Separation prints on the A-K fluorescent paper can be made from any other negative—35mm., 4 in. by 5 in., 8 in. by 10 in., or one-shot, Godbold reports.

The Minneapolis *Star* and *Tribune* has been doing experimental work in cooperation with Harvey T. Holsapple, Kemart vice president and officer of Holsapple and Hey Co., Minneapolis Graphic Arts supply firm, Adams said.

Dr. Herman H. Duerr and Dr. F. W. H. Mueller, in the Ansco research department, were principally responsible for the development work done by Ansco, according to Adams.

Reports of Equipment Sales and Installations

Mergenthaler Linotype Co.

14 LINOTYPES ORDERED

The *Wall Street Journal* has ordered 14 additional Linotype Comets and 56 fonts of type, it was announced by J. W. Reid, vice president in charge of sales for the Mergenthaler Linotype Co. Ten of the machines will be used in the *Wall Street Journal*'s new plant at Washington, D. C., two in the publication's New York, N. Y., plant, and two in the Chicago plant. These Comets will be operated automatically by the ETS (Electro Typesetting) unit developed by J. J. Ackell, business manager of the *Wall Street Journal*. With this order, the *Wall Street Journal* will have 34 Linotype Comets in operation.

•

Miller Installation

INSTALLS MILLER PRESS

Arrow Press, New York, N. Y., as part of a modernization and expansion program, in January installed a Miller TY Press as announced by Miller Printing Machinery Co.

•

Miehle Installations

NO. 49 OFFSET PRESSES—Miehle Printing Press & Mfg. Co. announces the following purchases: Allied Printing Service, Inc., Indianapolis, Ind.; Rufus H. Darby Printing Co., Inc., Washington, D. C.; Fine Arts Litho Co., Kansas City, Mo.; George F. McKiernan & Co., Chicago.

•

R. Hoe & Co., Inc.

PRINTING PRESS ORDER—The Philadelphia *Evening and Sunday Bulletin* has placed with R. Hoe & Co., Inc. an

additional order for presses. The additional order adds nine new printing press units with complementary equipment to the press equipment in the new plant now under construction. The *Bulletin's* Hoe newspaper printing press equipment will consist of 72 printing press units. The installation when completed will consist of two lines of 36 printing press units, with full r.p.p. color facilities, each extending over 319 ft., nearly a sixteenth of a mile. Total weight of the installation will be in excess of 3000 T. exclusive of press foundations.

•

Wood Machinery

WOOD PONY AUTOPLATE—The Corpus Christi (Tex.) *Caller-Times* recently placed an order for a second Wood

Pony Autoplate, manufactured by the Wood Newspaper Machinery Corp. According to the publisher, Conway C. Craig, the *Caller-Times* has almost tripled its circulation n the past 10 years.

MISCELLANEOUS—As part of a program of expansion involving new equipment for pressroom, reelroom and stereotype departments, the Long Beach (Calif.) *Independent-Press-Telegram* has placed an order with Wood Newspaper Machinery Corp. for eight Electrotab Autopasters. The Ontario (Can.) *Toronto Star* has ordered Wood machinery for the reorganisation of the stereotype department consisting of new and factcry rebuilt Automatic Autoplates, Heavy Duty Shavers and Furnaces; and, for the pressroom, Wood will ship nine Wood Reels with Pneumatically-controlled Stationary Strap Tensions and Automatic Autopasters.

HEAVY DUTY PONY AUTOPLATE—The Vallejo (Calif.) *Times-Herald* and Vallejo (Calif.) *News-Chronicle*, published by Senator Luther E. Gibson, recently purchased a Wood Heavy Duty Pony Autoplate machine. The Wood equipment being added is part of an expansion program aimed at maintaining the reputation of the two papers as being among America's most modern newspapers.

ELECTROTAB AUTOPASTERS—The Wood Newspaper Machinery Corp. has announced the sale of five Electrotab Autopasters to the Hartford (Conn.) *Courant* to supplement the five-unit Wood Metropolitan Color Adaptable Press installed in 1950. The new equipment is part of an expansion program for the *Courant*, established in 1764, the oldest newspaper of continuous publication in America.

•

F. P. Rosback Co.

Installations of Rosback bindery equipment reported by the F. P. Rosback Co. are as follows:

TWENTY-TWO SPECIAL PERFORATORS—Alabama School of Trades Print Shop, Gadsden, Ala. (by American Type Founders, Inc.); DeWitt Publishing Co., DeWitt, Ark. (by Western Newspaper Union); The Bradentown (Fla.) *Herald* (by E. C. Palmer & Co.); Balmoral Hotel, Miami, Fla. (by Addressograph-Multigraph Corp.); The Golden Gate Hotel, Miami Beach, Fla. (by Addressograph-Multigraph Corp.); Cypress Press, St. Petersburg, Fla. (by E. C. Palmer & Co.); Merchandise National Bank, Chicago (by Addressograph-Multigraph Corp.); Hamilton Press, Hamilton, Ill. (by E. G. Ryan & Co.); Proviso Township High School, Maywood, Ill. (by Economy Printers Products Co.); The Exira (Ia.) *Journal* (by Western Newspaper Union); Smith Printing Co., Crowley, La. (by Tayloe Paper Co.); The Drake Co., Shreveport, La. (by Western Newspaper Union); C. Lake & Son, Dearborn, Mich. (by Addressograph-Multigraph Corp.); The Office Supply Co., Jackson, Miss. (by E. C. Palmer & Co.); Lomax Printers & Stationery, Laurel, Miss. (by American Type Founders, Inc.); Delaney's Bureau of Printing, Missoula, Mont. (by A. E. Heinsohn); Sam Grobois, New York, N. Y. (by Irving Nissenbaum, Inc.); The Print Shop Fraser School, Syracuse, N. Y. (by Alan Dietch Printing Equipment); Westerman Print, Cincinnati, O. (by Nessler & Wagner Co.); St. Luke's Hospital, Cleveland (by Caxton Printers Supply); Oklahoma Bindery Co., Oklahoma City, Okla. (by Western Newspaper Union); Industry Printing, Reading, Pa. (by American Type Founders, Inc.); R & H Printing Co., Providence, R. I. (by American Type Founders, Inc.); Texas Dept. of Public Safety, Austin, Tex. (by Texas Type Foundry); Bennett Printing Co., Dallas, Tex. (by E. C. Palmer & Co.); Farah Mfg. Co., Inc., El Paso, Tex. (by Addressograph-Multigraph Corp.); The Dunlap Co., Lubbock, Tex. (by Addressograph-Multigraph Corp.); Dow Chemical Corp. Texas Div., Velasco, Tex. (by Addressograph-Multigraph Corp.); Charles F. McClung Co., Waynesboro, Va. (by American Type Founders, Inc.); State of West Virginia, Dept. of Purchases, Charleston, W. Va. (by Addressograph-Multigraph Corp.).

AUTO-STITCHER—Louis Thomas, Los Angeles (by The Steward Co.); Precision Bindery Service, Van Nuys, Calif. (by Harry W. Brintnall Co.); Finlay Brothers, Hartford, Conn. (by Merit Printers Supply); Universal Offset, Chicago (by Graphic Arts Equipment Co.); Flora Record Pub. Co., Flora, Ill. (by American Type Founders, Inc.); Vanco Printers, Inc., Freeport, Ill. (by Milwaukee Printers Roller Co.); H. P. Henrichs Publications, Litchfield, Ill. (by American Type Founders, Inc.); Univ. of Illinois, Urbana, Ill. (by Chicago Printers Machinery); Stump Printing Co., South Whitley, Ind. (by Kalamazoo Printing Machinery); Red Star Printing Co., Wichita, Kan. (by Western Newspaper Union); Transylvania Printing Co., Lexington, Ky. (by American Type Founders, Inc.); Franklin Printing Co., New Orleans, La. (by E. C. Palmer & Co.); R. Molenaar, New Orleans, La. (by E. C. Palmer & Co.); Southern Printing Co., New Orleans, La. (by E. C. Palmer & Co.); A B C Finishing Co., Baltimore, Md. (by John H. Burke & Co.); Hub Mail Advertising Service, Inc., Boston, Mass. (by American Type Founders, Inc.); Ind. School for Crippled Children, Boston, Mass. (by American Type Founders, Inc.); Richard W. Skeffington, Salem, Mass. (by Samuel Stevens & Wickersham Quoin Co.); Derrington Press, Waltham, Mass. (by American Type Founders, Inc.); Commercial Press, Minneapolis, Minn. (by Richardson-Sovde Co., Inc.); Johnson Printing Co., Minneapolis, Minn. (by Printers Supply Co.); Missouri Baptist Press, Jefferson City, Mo. (by Gane Bros. & Lane, Inc.); Central Printing Co., Kansas City, Mo. (by Western Newspaper Union); Homer E. Paris Printing Co., Kansas City, Mo. (by Western Newspaper Union); Ray Printing Co., Kansas City, Mo. (by Western Newspaper Union); Commercial Duplicating Co., Omaha, Neb. (by Western Paper Co.); Lasky Co., Newark, N. J. (by Globe-Printers Supply Co.); Thorner-Sidney Press, Buffalo, N. Y. (by Buffalo Printers Supply Co.); Chinese American Press, New York, N. Y. (by Ernest Payne Corp.); Taylor Instrument Co., Rochester, N. Y. (by Addressograph-Multigraph Corp.); Mason Printing Co., Syracuse, N. Y. (by Alan Dietch Printing Equipment Co.); Brooks Litho, Charlotte, N. C. (by American Type Founders, Inc.); Smith Printing Co., Lenoir, N. C. (by American Type Founders, Inc.); Powell & White Printing & Pub. Co., Cincinnati, O. (by Nessler & Wagner Co.); Perlmutter Printing Co., Cleveland (by Art Roth); Warner P. Simpson Co., Columbus, O. (by Western Newspaper Union); Interstate Training Service, Portland, Ore. (by American Type Founders, Inc.); General Press Corp., Tarentum, Pa. (by Harry Guckert Co.); Cooper Press, Providence, R. I. (by Wild & Stevens); Providence (R.I.) *Herald Press* (by Wild

764-S

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Every Purpose . . . Every Style — To Save You Time, Labor and Money!

At first glance, you might shrug off Challenge as just another paper drill. But look again, Mr. Printer, only this time a little more closely. For the closer you examine a Challenge Drill, the more hidden-value features come into view . . - and the more it becomes apparent that this is *the* machine for you.

There are eight Challenge Paper Drills to choose from — in hydraulic, foot or hand power models — with corner and slotting attachments optional. Each is designed to increase the scope and efficiency of your bindery operation! Send for full details, today.

Features Like These Add Up To Real Savings

- 2¼ in. back gage
- 2¼ in. stroke
- Power to drill through a 2 in. lift
- 2-Column head to prevent side play
- Right to left handling of stock
- Never-miss automatic trip gage

Challenge TRADE-MARK (R)

Challenge Owns The Printing Equipment Manufacturing Rights of *Morgans & Wilcox Co.*

THE CHALLENGE MACHINERY CO.

Office, Factories and Show Room: Grand Haven, Mich.

DEALERS IN ALL PRINCIPAL CITIES

& Stevens); Narragansett Litho, Providence, R. I. (by Wild & Stevens); Robinson Press, Inc., Woonsocket, R. I. (by Wild & Stevens).

PONY VARI-SPEED PERFORATORS—Paragon Printing Co., Little Rock, Ark. (by Roach Printers Supply Co.); Joe Budd Bookbinding, South Bend, Ind. (by Gene Bros. & Lane, Inc.); The Great A & P Tea Co., Detroit, Mich. (by Kalamazoo Printing Machinery); Victory Press, New York, N. Y. (by Zimmer Printers Supply Co.); The Steck Co., Austin, Tex. (by Western Newspaper Supply); Valley Sales Co., Stevens Point, Wis. (by Milwaukee Printers Roller).

MISCELLANEOUS—Gang Stitchers were installed at: Conway Printing Co., Conway, Ark. (by Roach Printers Supply Co.); Darby Printing Co., Atlanta, Ga. (by Julian K. Roberts); U. S. Weather Bureau, Asheville, N. C. (by E. P. Lawson Co.); Vogue Press, Inc., Columbus, S. C. (by Southeastern Printers Supply Co.). Ten Staple Gang Stitcher was installed at Manhart Alexander, Inc., Buffalo, N. Y. (by American Type Founders, Inc.); a Special Six Punching Machine was installed at Helm Inc., Detroit, Mich. (by Economy Printers Products); a Super XX Heavy Perforator was installed at Everett Waddey Co., Richmond, Va. (by E. P. Lawson Co., Inc.).

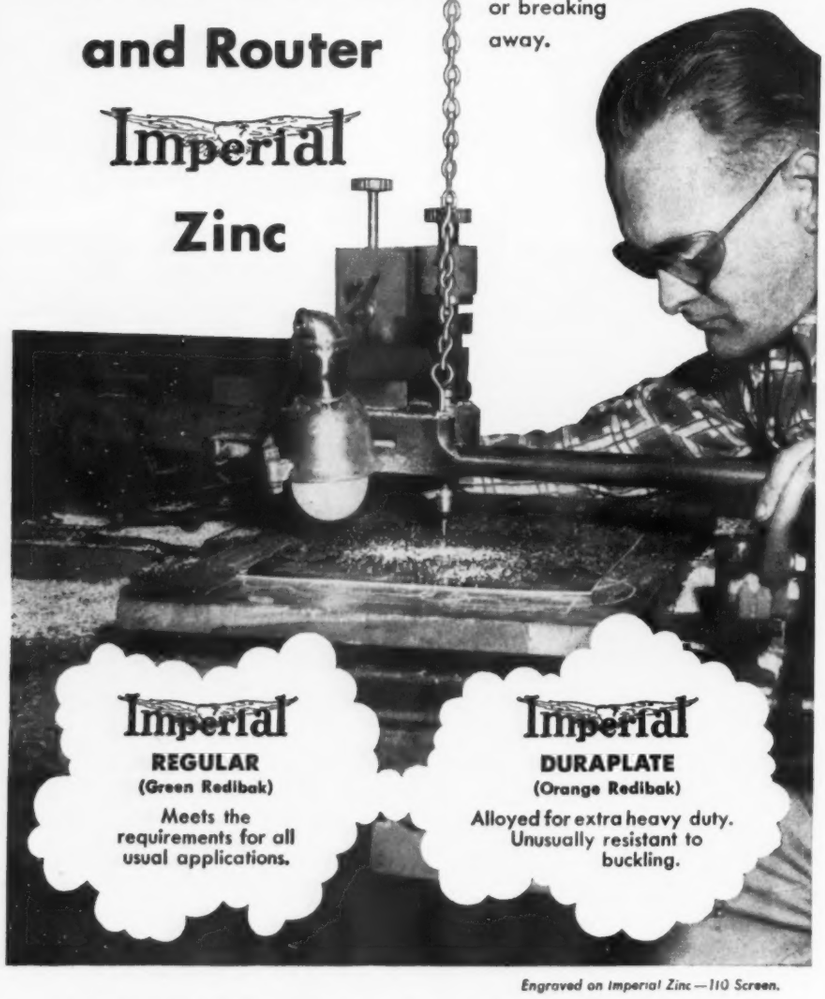
NEWS ITEMS

Fairchild Subsidiary Formed—To concentrate effort on a program for the Graphic Arts industry, formation of Fairchild Graphic Equipment, Inc., a wholly owned subsidiary of Fairchild Camera and Instrument Corp., has been announced by John H. Clough, president of the parent company. Headquarters of the subsidiary will be at 88-06 Van Wyck Expressway, Jamaica 1, N. Y. John M. Case, executive vice president of the parent corporation, has been named president of Fairchild Graphic Equipment, Inc., J. A. V. Hyatt, formerly director of commerical sales for Fairchild Camera, will be vice president. Stanley Ross, who recently came to Fairchild from the accounting firm of Peat, Marwick, Mitchell and Co., will be treasurer and comptroller. R. H. Lasche, president of Fairchild Intl., S. A., will serve as secretary. Members of the board of the new corporation, all officers of the parent organization, include Clough, Case, J. A. Hewlett, J. H. Dalton and C. L. Terrill.

Teamwork Between Metal and Router

Imperial Zinc

Under the router's bit—smooth and easy does it—with Imperial. Perfect teamwork between router and metal assure "close-up" without danger of chipping or breaking away.



Imperial
REGULAR
(Green Redibak)
Meets the requirements for all usual applications.

Imperial
DURAPLATE
(Orange Redibak)
Alloyed for extra heavy duty. Unusually resistant to buckling.

Engraved on Imperial Zinc—110 Screen.

IMPERIAL TYPE METAL COMPANY

Also distributors of magnesium sheets

SERVING THE GRAPHIC ARTS *Exclusively*

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IN CANADA: LATIMER, LIMITED, TORONTO 2-B

Strong Electric Corp. has announced the election of Harold E. Brown as vice president in charge of sales. Brown joined the Strong organization in 1935, coming from General Electric Co. He will be in charge of sales of all Strong arc lamps.

BROWN

Stacy Assigned as Sales Manager—S. K. Lynn, executive vice president and resident manager of E. G. Staude Mfg. Co., recently announced the appointment of Elmer G. Stacy as sales manager of its Rotogravure Division. Stacy was formerly associated with the Klingrose Gravure Div. of American Type Founders. His experience in the gravure industry includes field work.

Lundbye Now An Instructor—Axel Lundbye for some time serving as Research Director for Kable Printing Co., Mt. Morris, Ill., is now connected with Oklahoma A and M College, School of Technical Training, Okmulgee, Okla. Lundbye is an instructor in the offset printing department at this school. Courses taught include machine composition, letterpress and offset platemaking and printing. The school of technical training operates 12 months in the year. There are three semesters of 16 weeks each with semesters beginning in January, May and September.

Hoe's Annual Report—R. Hoe & Co., Inc., has issued its Annual Report for the year ending September 30, 1954, which marked the 150th year of operation for the company. The firm produces printing presses, saw blades and accessories, precision machine tools, ordnance equipment and foundry castings. Hoe reports net sales for 1954 of $18,705,590 as compared to sales in 1953 of $20,093,729. Part of the report is devoted to illustrations of the company's products. Also related is a description of the 63 Hoe Color-Convertible press units and other equipment recently installed at the Philadelphia *Bulletin*.

Nuclear Reactor Construction—A contract for the design, engineering, and construction of a nuclear reactor has been

Now . . . cut your cost for rubber plate rolls with

MOSSTYPE "D-MOUNT"® CYLINDERS

Patents Pending

Revolutionary new sleeve-and-mandrel assembly gives you accuracy of shafted rolls at far less cost

Now you can keep more jobs standing, carry more repeats by using economical new "D-MOUNT" Cylinders. "D-Mounts" work on a unique but proved principle. In the simplified "D-Mount" system you combine a light alloy sleeve and a steel mandrel into a shrink-fit assembly that remains rigidly "integralized" while on the press . . . yet which is quickly disassembled at the end of the run. And you are assured of perfect assembly every time . . . foolproof "D-Mounts" remain concentric always, never run out of true. Exceptionally lightweight, "D-Mounts" are also easier to handle and easier to store than steel rolls. Can be assembled and disassembled in minutes by untrained personnel.

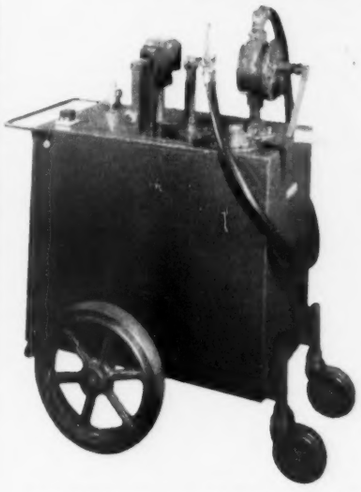
"D-Mounts" are available as bare cylinders for plates you mount yourself . . . or as bases for MOSSTYPE DESIGN ROLLERS

Mosstype Roller Co., Inc.

General Office:
33 Flatbush Ave., Brooklyn, N. Y.
Plant:
Waldwick, New Jersey

RUBBER PLATES MOSSTYPE® DESIGN ROLLERS

To Lower Costs and RAISE PRESSROOM EFFICIENCY ...INVESTIGATE MILWAUKEE PORTABLE INK TANKS



Daily newspapers in color printing, magazine printers and private and commercial plants—find out how you can lower your costs and increase color printing efficiency through the use of Milwaukee Portable Ink Tanks. Filling press fountains is quick, easy and dependable—eliminating shutdowns, mess and frequent clean up. Now you can have sufficient pump equipment to handle all your requirements.

SPECIFICATIONS

Milwaukee (Type 22RV-AG) Portable Wheel Tank with Agitator Assembly designed for handling printing inks. Has 60-gal. capacity tank of 3/16" sheet steel with tested leakproof seams. Fill opening has removable fine mesh strainer, screw type bar cap and gasket. Magnetic float gauge tells at a glance how much ink remains in tank. Operates easily on two 16" wheels and two 6" swivel wheels. Wheels fitted with effective brakes. Pump unit is of the reversible suction rotary type, is back geared and delivers approximately 15 gal. per minute at normal speed. Liquid may be pumped into the tank by turning the crank handle to the left and discharged by turning the handle to the right.

OTHER TYPE PORTABLES AVAILABLE. ALL UNDERWRITERS' LABORATORIES APPROVED FOR HAZARDOUS LIQUIDS

Write Today for Prices and Description Folder

MILWAUKEE PUMP & TANK WORKS, INC.

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awarded by Battelle Institute, Columbus, O. One of the first in the country to be owned and operated by a private organization, the reactor will be a key component in a $1½ million atomic research center Battelle is building 15 miles west of downtown Columbus. The primary function of the reactor will be to provide an intense source of neutrons and atomic radiation for research in the chemical, metal, machinery, electronics and textile and other industries.

Century Operations — The Century Printing Ink Co. recently began operations at 225 S. Van Brunt St., Englewood, N. J. The company plans to specialize in making inks for the packaging industry. The officers involved are: President, Richard F. Atkinson; vice president and treasurer, Clarence C. Vormelker, and vice president and secretary, Robert V. McKenna. The principals were all formerly of Sinclair & Valentine Co.

Brown Appointed by Art Gravure—Pres. Frederick Duncan Murphy, Art Gravure Corp. of New York, recently announced the appointment of Robert Brown as sales promotion manager. Brown was transferred from Art Gravure Corp. of Ohio in Cleveland. His background includes several years with the *Cleveland Plain Dealer*.

Minnesota Mining Appointment—Dr. Robert N. Flesch has been appointed supervisor of new production development, Printing Products Div., according to a recent announcement by Minnesota Mining & Mfg. Co. Dr. Flesch, who joined Minnesota Mining in 1950, was formerly a senior chemist in the division. He received his B.S. degree from St. Thomas College in 1942 and his Ph.D. in organic chemistry from the Univ. of Minnesota in 1950.

Intaglio Organization Changes—Intaglio Service Corp. recently announced several changes in its organization. James Snyder, formerly general manager at Intaglio-Cadillac, Inc., was appointed business manager at the Chicago plant, while James Dunn has taken over Snyder's duties in Detroit. Wilbert J. Uhlick has rejoined Intaglio sales force in Chicago, following a period as business manager at that branch of the company, and Robert McMichael, previously at Intaglio's Philadelphia office, has also moved to Chicago sales. The Philadelphia office is in charge of Robert Gorton, New York sales.

X-Ray Micrometer

electronically gauged!

EVERY SHEET of our photoengraving metal is checked by this amazingly accurate device.

Here's proof of another outstanding application of modern science . . . in our continuous efforts to provide engravers with perfect metal.

ZOMO ELECTRIC ZINC • A-Z ELECTRIC ALLOY • ZOMAG

Ideal Appointment—Robert R. Trundle has been appointed sales representative of Ideal Roller & Mfg. Co., Inc., for the state of Tennessee, according to a recent announcement. Trundle has had 14 yrs. experience in the Graphic Arts beginning as an apprentice pressman in Chattanooga, Tenn. Recently he has had selling experience in the South. Trundle replaces A. W. Lyell, former company representative.

TRUNDLE

H. L. Higgins has been named composing room foreman of the Canton (O.) *Repository*. Formerly, he was composing room superintendent of the Detroit *News* for 13 years. Higgins succeeds Carl S. Kinney who has taken a position as production manager of the Gary (Ind.) *Post-Tribune*.

New Headquarters—Bertsch & Cooper, advertising typographers and a division of American Typesetting Corp., Chicago, has leased space for what is said will be the largest plant of its kind in the United States, according to Robert Snyder, president of Bertsch & Cooper. The plant will be located at Jackson Blvd. and Racine Ave. A second floor will be added, giving a total of 52,000 sq. ft. of floor space. The entire building will be air conditioned. It is expected the new quarters will be occupied on or about June 1.

Cold Rolled Strip Mill—Alan Wood Steel Co. has started operation of its new cold rolled strip mill at Ivy Rock, Pa., according to a recent announcement by Pres. John T. Whiting. The new mill was constructed by Alan Wood on land adjacent to the Company's hot rolled strip mill. The cold mill, costing approx. $7 million, will have an initial annual capacity of 144,000 T. of cold rolled strip and sheet. The cold mill is housed in new buildings with approx. 48,000 sq. ft. of floor space. The mill itself is a 4-stand tandem mill with a finishing speed of 2200 ft. per min. It is capable of handling coils up to 15,000 lbs. max. weight. Accessory equipment in the mill includes

cut metal melting costs with a 'SURFACE' furnace

SAVE TIME. Melts 5,000 lbs. of lead in only 2 hours. Bottom outlet with casting trough, easily swung through large arc, facilitates pig casting. **SAVE SPACE.** Hood doors, bottom outlet and valve handles can be positioned conveniently no matter where the furnace is to be placed. **SAVE FUEL.** Simple-adjusting 'Surface' burners insure complete combustion, maximum efficiency.

Pick the right furnace for your production requirements from 5 sizes with capacities of 100-5,000 lbs. They use natural gas, manufactured gas, or LP gas. Temperatures up to 1200F.

Call your 'Surface' representative or write for Literature H54-13.

SURFACE COMBUSTION CORPORATION, TOLEDO 1, OHIO

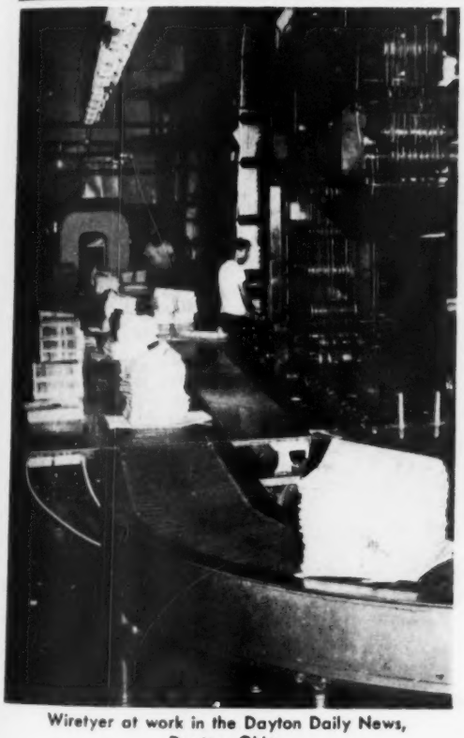
FAVORED
ALL OVER THE WORLD

As you shoot for the goal of a well-printed newspaper, you should take advantage of the assist offered by Wood Dry Mats.

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.

WOOD DRY MATS
ALWAYS UNIFORM

New York City Office
551 FIFTH AVENUE, NEW YORK 17, N. Y.



Wiretyer at work in the Dayton Daily News, Dayton, Ohio.

LET USERS TELL YOU ABOUT

Wiretyer (fully automatic) BUNDLE-TYING EQUIPMENT

IF you're interested in

SPEED

(From our files:)

". . we had [previously] many complaints from our mail-room on the speed of our presses . . 36,000 per hour. Our production now exceeds 42,000 per hour and at no time do we have any of the former complaints.."

QUALITY

". . the Wiretyer double-tie makes a better and neater package than when done in any other manner . ."

DEPENDABILITY

". . we tie exclusively now with the [Wiretyer] machine."

COMPACTNESS

"We are able, with the compact bundle tied by Wiretyer, to store more bundles on a truck.

ECONOMY

. . . then the **WIRETYER** is worth looking into!

There's much, *much* more in our files. Wiretyer is saving up to 60% on wire costs; a new conveyor developed by Wiretyer boosts production still higher. Wiretyer now can furnish a fully automatic bundle-tying and conveyor installation, engineered and custom-built to your requirements.

Write today for complete details on how Wiretyer can increase production and save money in *your* mailroom.

WIRETYER CORPORATION
230 WARBURTON AVENUE, HAWTHORNE, NEW JERSEY

eight batch type annealing furnaces, a temper mill and a slitting line.

German Heidelberg Factory Tour—Recently a large group of American students which is studying at an American occupational authority branch of the University of Maryland in Heidelberg, Germany, made a tour of the Original Heidelberg factory located there. These men and women are both American Army personnel and civilian employees, and went to the factory to study the machine departments and American assembly line methods. They had an opportunity to trace the 104 yr. history of Heidelberg presses and visit the Heidelberg Demonstration Print Shop to see the *Heidelberg News* being printed.

Enlarges New York Office—Orville Dutro & Son, Inc. has expanded its offices in New York and will maintain working presses for demonstration purposes, according to announcement by Orville Dutro. The expanded quarters are located in Suite 503, 1140 Broadway. Norman X. Guttman is Dutro's eastern manager.

Staude Purchases High Production Co.—E. G. Staude Mfg. Co. recently announced purchase of the High Production Co. of Philadelphia. High Production Company manufactures the Alpha, Beta, Delta and Diana lines of gluers and wrapping machines for the setup paper box machinery industry and the Viewmatic machine which produces transparent containers. Samuel K. Lynn, executive vice president of the Staude firm, stated that all manufacturing and engineering of the High Production Co.'s line will be operated from the Staude plant in St. Paul, Minn. Provisions have been made for the transfer of experienced personnel and inventory to the Staude plant.

ATF Consolidation—American Type Founders is consolidating all engineering and manufacturing operations at its main plant in Elizabeth, N. J., and will vacate the plant which it had been renting at Mt. Vernon, N. Y., for the manufacture of web presses. With the decline in defense work at the Elizabeth plant, capacity now exists to permit ATF to integrate operations. Sales and Service of ATF products will now be under the direction of R. A. Tobias, vice president. Douglas Murray will continue as sales manager of the Web Press Div.

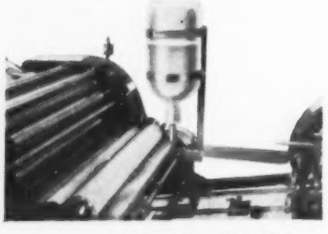
Get better, more profitable printing—with BALDWIN equipment!

Any Press is a Better Press
—With Baldwin Equipment

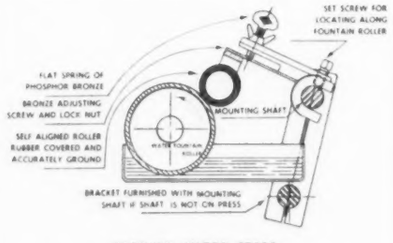
The Baldwin line of expertly engineered press equipment has been designed to increase press efficiency and production uniformity with minimum maintenance and expense. For complete details of any item, please send make, model and sizes of your presses.

All Baldwin equipment sold on 30 day free trial.

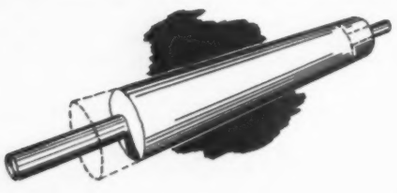
BALDWIN INK AGITATORS
—Continuous traveling rotating cone keeps ink against fountain roller, uniform on the job in mill condition. Cone is simple to remove and clean. Separate motor drive. Applicable to almost any offset or letterpress fountain.



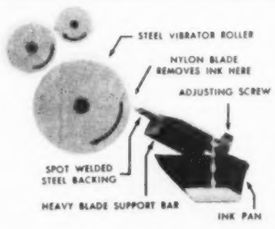
BALDWIN WATER LEVELS
—Automatically maintain constant fountain solution level, stabilize fountain setting, save pressman's time. Unbreakable polyethylene container has automatic non-spill valve — keeps solution supply visible.


SET SCREW FOR LOCATING ALONG FOUNTAIN ROLLER
FLAT SPRING OF PHOSPHOR BRONZE
BRONZE ADJUSTING SCREW AND LOCK NUT
SELF ALIGNED ROLLER RUBBER COVERED AND ACCURATELY GROUND
MOUNTING SHAFT
BRACKET FURNISHED WITH MOUNTING SHAFT IF SHAFT IS NOT ON PRESS

BALDWIN WATER STOPS
—Make moisture control easy and positive, end flood and dry-up problems, eliminate frequent hand settings. Fully adjustable to all requirements, easily installed. 2 to 10 inch sizes, longer on special order.



BALDWIN VIBRATING ROLLERS
—Improve ink and water distribution to reduce "layout ghosts" on offset and letterpress presses. Standard stroke, 3 to 6 inches—longer on special order. Diameters to fit small spaces.



BALDWIN PRESS WASHERS
—Give fast, clean washups automatically, without ink roller removal. Adjustable nylon blade guaranteed six months, easily replaceable. For offset and letterpress.

Manufacturers of:
BALDWIN INK FOUNTAIN AGITATORS • BALDWIN VIBRATING ROLLERS
BALDWIN PRESS WASHERS • BALDWIN WATER STOPS • BALDWIN WATER FOUNTAIN LEVELS

William Gegenheimer Company, Inc.
80 Roebling Street • Brooklyn 11, New York

HARLOE

New Vice President—Appointment of William A. Harloe as vice president of R. Hoe & Co., Inc., was recently announced by Joseph L. Auer, president of the company. Harloe will assist in directing the current Hoe program of expansion. A graduate of Dartmouth College and St. John's Law School, Harloe presently resides in New York.

Reeves Pulley Co., Purchased—Reliance Electric & Engineering Co. has acquired the Reeves Pulley Co. of Columbus, Ind., it was announced recently by J. W. Corey, company president. The two companies will merge operations in exchange for Reliance common stock and cash, the Reeves shareholders becoming partners and stockholders in Reliance. Reeves manufactures infinitely variable speed transmissions and mechanical vari-speed drives. The management at Reeves will remain intact and will continue as a separate division. Reeves employs 550 persons; Reliance has over 2400 on its rolls.

KUNZ

Editor and Publisher Franklin Schurz, South Bend (Ind.) *Tribune*, has announced appointment of George P. Kunz as production manager. Subsequently, Kunz announced production department executives as follows: Alex A. Poczik, composing room; Royal H. Rager, stereotype; Carl I. Schaefer, pressroom; Donald Holstein, mailroom, and Earl S. Currise, photoengraving. Kunz has been with the *Tribune* 34 years. He has been composing room superintendent during the past seven years.

Visit to Carnegie Tech—A German printing plant study group attended class at Carnegie Tech's School of Printing Man-

SAVE 10%

SUPERSEDED MODEL . . .
BRAND NEW . . . LIMITED QUANTITY . . .

WESEL

Heavy Duty Proof Press

- ★ Foolproof mechanical safety device
- ★ Bed size 12¾" x 29" ★ Automatic stopping
- ★ Heavy construction withstands stresses and eliminates vibration
- ★ Grease-sealed lifetime bearings ★ Unibrake motor
- ★ Ink rollers with synthetic rubber covering
- ★ Variable speeds—25 to 50 impressions per minute

Model EPP-3

Effective March 1, 1955

$1255.50 F O B, SCRANTON, PA.

See Your Dealer or Write Direct To:

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SPEED PRODUCTION with RICHARDS' PRECISION

SAWS • ROUTERS • MORTISERS

For further information on these and other **RICHARDS EQUIPMENT,** *Saws — Routers — Mortisers, please write*

NEW MODEL

Code: M2-B

ENCLOSED CURVED PLATE ROUTER

with new close coupled single belt drive
Ball bearing construction throughout
Price $1875.00 complete

'ELECTROMATIC' SAW TRIMMER

For Stereotypers, Electrotypers, Photoengravers

Code: EST-27x36 Table
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'MULTIFORM' RADIAL ROUTER

For Straightline and Fine Detail Routing
Patented Straightline Control Feature

J. A. RICHARDS COMPANY

903 N. PITCHER STREET • KALAMAZOO, MICHIGAN

agement recently under auspices of the U. S. Foreign Operations Administration. The 12 man group, composed of owners, managers, technical experts and printing plant foremen from eight West German cities, are visiting this country for one month to study the importance of the printing plant to the American industrial community and its relationship to the problems of productivity. At Carnegie Institute of Technology, the visitors attended the School of Printing Management and listened as Dean Glen U. Cleeton and Assistant Dean Kenneth R. Burchard described the program of instruction and the objectives.

Sun Chemical Picks Secretary—Frederic E. Crist was elected secretary of Sun Chemical Corp., it was announced recently by Ralph C. Persons, president of the firm. Crist, who joined Sun in 1953, will continue as director of Industrial Relations, assistant to the president, and as a member of the Corporation's Management Committee. An attorney by profession, Crist is a graduate of New York University's School of Law.

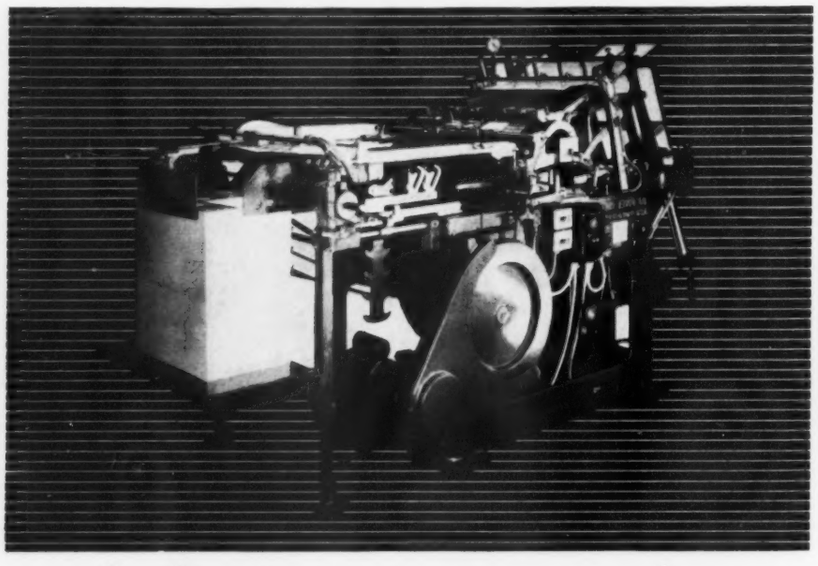
Fairchild Sales Representative — E. Neal Eaton has been appointed sales representative for Fairchild Graphic Equipment, Inc., according to a recent announcement. Operating out of Kansas City, Mo., Eaton will cover parts of Kansas, Nebraska, Iowa, Missouri and Arkansas. Eaton has had experience as general manager of a weekly newspaper and commercial print shop, and as account man on the ad staff of the Tarentum (Pa.) *Valley Daily News*.

Appointment at Moore Business Forms—Richard J. O'Brien has been named general production manager of the Eastern Division of Moore Business Forms, Inc., it was announced today by Walter L. Eggert, vice president and general manager. A native of Chicago, O'Brien joined the Moore organization in 1940 as assistant superintendent in the Buffalo Avenue plant. His experience in the printing industry goes back to 1925 when he started with a magazine publishing plant in Chicago as a press boy. Moore was named manager of the Buffalo Avenue plant in 1945, and in 1946, manager of the Highland Avenue plant where he was responsible for the reorganization of the plant facilities, including the carbon manufacturing plant. In 1953, O'Brien headed a program of development and improvement of existing products as engineering development manager.

see the New

BANTHIN

13 x 20 CYLINDER PRESS



the lowest priced press in its class

Compare the versatile Banthin 13 x 20 Horizontal Cylinder press with more expensive presses in its field, and you'll agree with printers all over America that the Banthin provides low cost, quality production.

Examine these outstanding features: New variable speed pulley which gives any speed from 1800 to over 4000 I.P.H.; Tachometer provides direct I.P.H. readings; Bijur one-shot lubricating system to all vital parts; easily accessible ink plate and form; no double rolling required due to superior ink distribution; convenience of operation.

Ask for a demonstration or write for additional information and prices.

THE BANTHIN ENGINEERING COMPANY

1849 MAIN STREET • BRIDGEPORT, CONNECTICUT

Chemco Managerial Appointment—Sam Anson, general sales manager, Chemco Photoproducts Corp., recently announced appointment of Andrew H. Paulson as manager of technical sales. Paulson has had 30 yrs. experience with Chemco.

PAULSON

Heidelberg Cost Reduction Contest—Heidelberg Eastern, Inc., recently announced the conclusion of a cost reduction contest which has been held for the past several months among service representatives operating out of the Heidelberg office in Long Island City, Chicago and Columbus, O. The six Original Heidelberg press representatives who won awards are as follows: Joseph P. Carroll, Columbus, O., Wm. B. Harris, Ellettsville, Ind.; Milton H. Clark, Portland, Me.; Robert F. Hall, Oswego, New York; Richard A. Lampe, Brooklyn, N. Y.; James E. Wilson, Chicago, Ill.

Cline Elects Officers—Harvey E. Brundage, president of Cline Electric Mfg. Co., has been elected chairman of the board of directors according to Herbert R. Behr, vice president and secretary of the corporation; and Warren P. Scott has been elected to succeed Brundage as president. It was also announced that Thomas J. Corbally has been elected as vice president and treasurer; Walter G. Earle and Edward F. Kumpe as vice presidents, and Otto H. Loser and Paul A. Benke as assistant treasurer and assistant secretary, respectively. Brundage has been with the Cline organization more than 30 yrs., and he will continue to devote himself particularly to the company's customer relations. Corbally was formerly consultant to the Deputy Chief of Staff Comptroller of the U. S. Air Force in Washington, D.C.; and prior to that was vice president and comptroller of Walter Scott & Co. Earle, Benke and Loser have all been with Cline about four years and continue to serve respectively as director of manufacturing, director of purchases, and comptroller.

Changes in Management—Fred W. Danner, former President of the Danner Press, Inc. and The Akron Type setting Co.,

Probably America's Finest!

Monomelt Hydraulic

HEAVY DUTY SHAVER

THIS HIGH SPEED production shaver handles electros, stereos, metal base, plastic and wood. Accurate to .001". Full page (17½ x 22½") capacity with shaving range from .140" to 1". Extra heavy, reinforced construction, hand finished and fitted one piece cast iron base. Micrometer control. Variable speed hydraulic feed. Fast table return. Built-in vacuum disposal. New positive hold down. If you have any shaving problems, write for full details and price.

SEND THE COUPON

THE MONOMELT COMPANY, INC.
1611 N.E. Polk, Minneapolis, Minnesota

Please send complete information on your new Heavy Duty Hydraulic Rotary Shaver.

NAME_____

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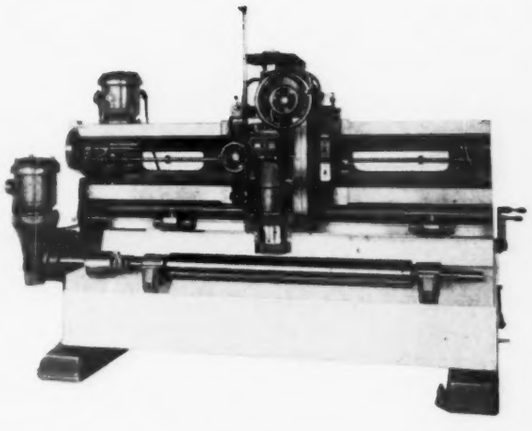
CITY_____ ZONE____ STATE_____



ROTOGRAVURE
GRINDING AND POLISHING MACHINE
Precision Built to Grind and Polish to .0003"

Sold to the Gravure Industry for:

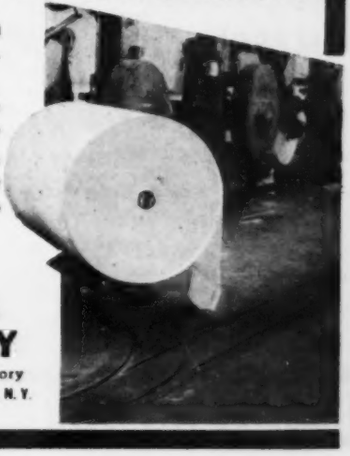
25 YEARS

STANDARD PROCESS CORPORATION
Manufacturing Gravure Equipment & Supplies
2704 W. Roscoe Street • Chicago 18, Ill.

The ease and versatility of modern newsprint handling shown here . . . through a definite path of travel that helps to reduce white waste and floor wear . . . clearly demonstrates the utility and efficiency of Jampol handling methods and equipment. Jampol, with more than 25 years of specific experience, can as readily design and build the equipment and system to meet your particular needs perfectly.

If you are interested in better handling at lower cost for greater return, Jampol will welcome the opportunity to discuss your problems.

Can You Think of a **BETTER, EASIER WAY** TO HANDLE NEWSPRINT?



THE JAMPOL COMPANY
General Offices and Factory
728-742 61st St., Brooklyn 20, N. Y.

FLAT-WRAP
FOLD-WRAP
BAND-WRAP
26 TIMES FASTER than HAND-WRAPPING
YOUR MAGAZINES the MODERN WAY!

The RIGHT machine to wrap your magazines tighter, faster and more economically is made by MAGNACRAFT.

45 times faster than ENVELOPING

Maintain a smooth-working mailing room schedule and cut your cost at the same time! Anyone can operate the MAGNACRAFT wrapping machine.

Magnacraft MFG. CO.
3138 W. CHICAGO AVE., CHICAGO 22, ILL.
Write to DEPT. D for details

recently announced changes in management. F. N. Raffath, former vice president and production superintendent of The Akron Typesetting Co., became its president. Frederick B. Underman was named president of Danner Press, Inc.; he has been with Danner Press since 1938. Marie W. Bell became secretary-treasurer of both companies. Fred W. Danner will be chairman of the board of both companies.

D. W. Brabeck, former vice president in charge of the Northern Division, was named general sales manager of Brown & Bigelow at a recent board of Directors meeting by president Charles A. Ward. C. C. Goerdt, former assistant to the general sales manager, was elected a sales vice president of the firm and assigned to the Northern Division to take over the post vacated by Brabeck.

ABC of Offset

(Continued from Page 78)

is made instantly apparent because the positive will not fit or register with the blue image on the glass. This permits corrective measures to be taken before a printing plate is made.

All films to be stripped must be uniform in thickness. Variations in film thickness when stripping on glass should be avoided like a plague. If this is not done, breakage of the blue glass and possibly the cover glass of the vacuum printing frame machine may result. And that's expensive.

Where, for reasons of permanence, blue glasses are made for each individual color, all positives are then made on strip film. These films, after being processed, are stripped from their supporting base and by means of an adhesive solution are transferred to the blue glass where they are carefully placed in register with the blue image. When properly and correctly executed, this type of stripping provides permanence to the blue glass assembly, of indefinite duration.

NOW! FULLY AUTOMATIC
Automatic Metal Pump
or
MANUALLY OPERATED
Particulars furnished on request

Hundreds are in use among stereotype and electrotype foundries performing for all types of metal delivery requirements.

INTERNATIONAL NEWSPAPER SUPPLY CORPORATION
134 N. LaSalle St. Chicago 2, Illinois

Hand Work

The blue glass lends itself readily to hand work.

Whether the blue image be on glass or plastic film base, the artist can always apply opaque to the image surface. He can fill in solids, draw ornamental decorations, borders or designs, do hand lettering and actually execute a complete fake color reproduction of a line or black and white original copy.

Benday or Tintograph mechanical screen tints can be applied without difficulty to any selected areas and strip film positives of body type can be stripped into their relative positions.

Uses and applications of blue glasses are ideal in the reproduction of comics, cartoons, play books and work of similar nature, where coloration is accomplished by hand work.

A Final Thought

To clarify any possible confusion of thought about blue glasses for halftone reproduction, it is not actually necessary to use halftone negatives or positives alone in the making of blue glasses. It is frequently a greater advantage to use continuous tone negatives or positives of illustrative material or copy. A single panchromatic film negative or positive of a colored copy will invariably contain more overall detail than will be available from a color corrected negative or positive in halftone, of any single color component for blue glass purposes.

Following discussions will deal with platemaking techniques and procedures.

(To Be Continued)

AMBACO CONTINUOUS BALING

COMPRESS COSTS WITH CONTINUOUS BALING

The Ambaco Continuous Baler fits into production line methods and makes possible the removal of trimmings and scrap paper with efficiency and speed.

Continuous baling, either conveyor or suction fed, meets the peaks and lulls of your production. Transform nuisance waste into saleable bundles. Save valuable floor space and reduce fire hazards.

An Ambaco Baler is available for every scrap removal need. Write us today for full information.

The AMERICAN BALER CO. 700 ORCHARD ST. BELLEVUE, OHIO

Literature for Asking

(Continued from Page 42)

Pressroom

IMPRINTING PRESS

B. Verner & Co., Inc., has prepared a bulletin in which it discusses imprinting, coding and dating operations on the Multipress. The press is designed for imprinting numbers, dates, flavors, etc., on flat, folded cartons and labels. Specifications are stated in the four page, two-color, letterhead size bulletin. Please mention PEE No. 152L when requesting a copy.

PORTABLE COLOR INK FOUNTAIN

Wood Newspaper Machinery Corp. devotes four pages of halftones and line diagrams to description of its Wood Portable Color Newspaper Press Ink Fountain for application to any printing press unit. Features and utilities are described. For a copy please mention PEE No. 153L in your request.

MIEHLE 41-46 LETTERPRESSES

The single color and two-color Miehle Models 41 and 46 Letterpresses are described in a 12 page booklet prepared by Miehle Printing Press & Mfg. Co. Among the features of the two models are the Dexter stream feeder, chain delivery, register mechanism, accessibility and inking mechanism. These are accompanied by illustrations. Detailed specifications are included. The booklet, which measuree 11 in. wide by 8½ in. long, is printed in two colors. Please mention PEE No. 154L when requesting a copy.

MILLER OFFSET PRESS

Miller Printing Machinery Co. has issued a 24 page, multicolor brochure on the firm's E.B.CO 22 in. by 34 in. Offset Press. The fully illustrated booklet fully describes the press and gives examples of offset line and halftones on all types of stock from tissue to heavy cover, having either antique or enamel surfaces. For a copy, please mention PEE No. 185L in your request.

"IT TAKES ALL KINDS"

This is the title of an illustrated four page bulletin, 3⅜ in. by 8⅜ in. In referring to static eliminating equipment, The Simco Co. explains that it makes metal encased static bar, channel static bar and shockless static bar for static elimination. For a copy please mention PEE No. 155L in your request.

RAMSEY CHAIN DRIVES

The Catalog No. 154 published by Ramsey Chain Co., Inc., is entitled *Ramsey Chain Drives*. The illustrated catalog is 8½ in. by 11 in. size and contains 20 pages descriptive of sprockets and chains for driving printing machinery, compressors, conveyors, fans and blowers, paper mill machinery, pumps, punch presses, textile machines, as well as general industrial machinery. A number of pages are devoted to data for driving pinions, driven sprockets, pre-selected drives, lubrication, hunting link sections and installation and maintenance. For a copy please mention PEE No. 150L in your request.

IMPROVED CAPCO REWINDER

Illustrated four page letterhead size bulletin is descriptive of the Capco Rewinder published by Capital Tool & Mfg. Co. All features are described. Overhead lift is not required, splicing operation easily accessible, slitting arrangement for cutting damaged rolls to smaller size. Out-of-round rolls may be rewound. For a copy please mention PEE No. 157L in your request.

SUPER-POWER SHEET DRIER

The J. E. Doyle Co.'s Super-Power Infrared Sheet Drier is illustrated and described in a two page bulletin. Device permits faster backup and reduction of static. The Drier is available for all types of presses. For a copy, please mention PEE No. 158L in your request.

INK FOUNTAIN AGITATOR

A descriptive bulletin on the improved Baldwin ink fountain agitator designed for installation on letterpress and offset presses has been issued by William Gegenheimer Co. Applications and specifications of the device are included. The four page letterhead size bulletin is printed in two colors. Please mention PEE No. 159L when requesting a copy.

PAPER COLORING MACHINE

A description of the Dutro Colorverter, a paper coloring machine designed for coloring, slitting and rewinding operations, is contained in a four page bulletin issued by Orville Dutro & Son, Inc. Paper samples of color produced on this machine, stock information and general specifications are included. The letterhead size bulletin is printed in four colors. Please mention PEE No. 160L when requesting a copy.

CONTROL OF PRINTING INKS

Interchemical Corporation, Printing Ink Div., has published an eight page bulletin entitled *Control of Printing Inks* written by F. A. Weymouth. Included in the bulletin are discussed wave length of visible light, pigment particles and printed ink films in relationship to controlling printing inks. Illustrations and charts are also included. Please mention PEE No. 161L when requesting a copy.

WEB PRESS DRIVE AND CONTROLS

A description of the Cutler-Hammer single motor drive with electronic control for web printing presses is provided in an eight page booklet issued by Cutler-Hammer, Inc. Included are illustrations of the motor and control panels. The booklet is printed in two colors and measures 8½ in. by 11 in. Please mention PEE No. 162L when requesting a copy.

AUTOMATIC COLOR REGISTER

R.o.p. color can be kept in register automatically at all operating speeds—this is the theme of a four page bulletin released by Electric Eye Equipment Co. The Hurletron Automatic Circumferential Register Control system at the Milwaukee (Wis.) *Journal* is discussed. For a copy, please mention PEE No. 163L in your request.

IMPROVED SHEET DELIVERY

Four page illustrated bulletin, size 8½ in. by 11 in., carries description and discussion about Champlain Co., Inc.'s improved sheet delivery for Champlain roll fed rotary presses for processing glassine and paper backed foil, label paper, heavy paper and cardboard. Sponsor states this equipment is 1½ times faster; undamaged edges; neatly jogged pile, and ¼ in. accuracy. Please mention PEE No. 164L when requesting a copy.

ANTI-SKINNING AGENT

Ink-Sav, an anti-skinning agent, is described in a four page bulletin prepared by The Ames Laboratories, Inc. The uses of Ink-Sav are listed under the three headings of Letterpress, Offset and Silk Screen Processing. For a copy, please mention PEE No. 165L in your request.

FOLDER KNIVES

A simple four page bulletin, presented by Moore Production Tool Specialties, illustrates Moore's special teeth

here's how Rouse REDUCES YOUR TIME COSTS

CUT A FULL GALLEY OF MIXED MEASURES SLUGS IN ONLY 35 SECONDS

Rouse BAND SAW

No more gauge setting! No more reclamping or measuring! That's why the Rouse Band Saw offers you by far the most economical way to accurately cut slug lines to different measures in the shortest possible time. No other machine nor method can even come close to this achievement.

If you operate one or more linecasting machines on variable measure composition, the Rouse Band Saw will do the work of hours in minutes. Expensive time saved will be unusually great in work requiring frequent changes in line measures, such as ad work, catalog runaround work, etc.

NEW ROUSE CATALOG

Write for your copy TODAY!

CUT 1000-1200 ACCURATE MITERS IN ONLY 1 HOUR

Rouse POWER MITERER

If you need miters in either small or large quantities, no other machine nor method can turn out anywhere near as many perfect joining miters from strip material. That's how the Rouse Power Miterer can slash your time costs by doing work in minutes that now takes hours. It quickly pays for itself in expensive time saved.

From the smallest job shop up to the largest plant, only Rouse makes a Power Miterer for every type of use. Can be bought as a bench model or with any other equipment you wish.

Virtually every printing plant in the world uses one or more Rouse Time-Saving Products for Printers

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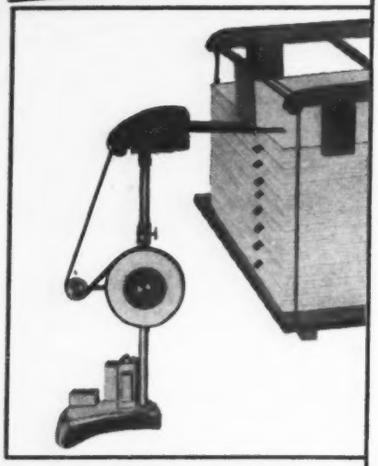
MITERING MACHINES
LEAD and RULE CUTTERS
COMPOSING STICKS
TYPE GAUGES
SLUG CLIPPERS
BAND SAWS

ROUSE PRODUCTS—THE STANDARD OF THE WORLD FOR 50 YEARS

Designed for the PRESSMAN



TALLY-TAB® MODEL B
Automatic Counter and Tabber

Here's the device that ranks with the press counter and offset spray—according to pressmen in plants all over the country—plants like Davis-Delaney and Charles Francis! The pressman just sets this precision instrument and gets automatic, effortless, ACCURATE count every time!

Helps make the pressman's job easier and better! Operates on every type of pile-delivery press, cutter, creaser and sheeter. For any size sheet or weight of stock.

Completely redesigned from covered head to sturdy base, with new make-up switch (for spoiled sheets) and dial for resetting to zero.

Counts and tabs 25, 50, 100, 250 or 500 sheets. Special timer for other counts can be supplied. Operates on A. C. Portable—easily moved anywhere in your plant.

FREE 30 DAY TRIAL

Want to try a Tally-Tab at OUR EXPENSE? We'll send you one . . . try it for 30 days . . . give it back without obligation . . . *if you can get yourself to part with it!* Call or write today!

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280 LAFAYETTE ST., NEW YORK 12, N. Y.
WOrth 6-0400

for printing press folder knives and gives principal features of the knives. For a copy, please mention PEE No. 166L in your request.

Bindery

QUADRUPLE BOOK FOLDERS

Mechanical features of Dexter's Model N quadruple 16 and double 32 book folder and the Duplex quadruple 32 and double 64 book folder are presented in a recently issued bulletin by Dexter Folder Co. The Model N Quad Folder is designed for the folding of sheets from 42 in. by 58 in. offset, rotary and flat bed presses, and also from 52 in. by 76 in. presses, slitting on the press. The Duplex Quad Folder is similar to the Model N with an additional cross feeder and first fold level. Specifications and a floor plan are included in the bulletin. Please mention PEE No. 167L when requesting a copy.

CARBIDES IN TOOL INDUSTRY

A six page reprint of *What is Carbide?* by Arthur R. Segal, is being offered by the North American Products Corp. The reprint is from *Wood Working Digest* and is a technical resume of carbides in connection with carbide cutting tools. For a copy, please mention PEE No. 168L in your request.

ROSBACK AUTO-STITCHER

Illustrated two page bulletin published by F. P. Rosback Co. is descriptive of Rosback Auto-Stitcher. Features of equipment are given. Optional equipment also described. For a copy, please mention PEE No. 169L in your request.

GLUE TIPPER

The Tipmaster all-electric glue tipper, which features what is known as the Guidemaster guide system, is the subject of a four page letterhead size bulletin prepared by Pierce Specialized Equipment Co. Some of the other features described include the one unit fountain and tipper, retractable feed board and interchangeable guides. Included also are descriptions of accessories for the Tipmaster. The letterhead size bulletin is printed in two colors. Please mention PEE No. 189L when requesting a copy.

Mailing Room

WIRE-TYING MACHINES

A well illustrated four page bulletin has been issued by the Signode Steel Strapping Co., in which are given specifications of Signode-Parker Automatic Wire-Tying Machines. The four models described either tie newspapers in bundles; tie bundles up to 24 in. high and 27 in. wide; tie bundles 20 in. high by 18 in. wide, or tie bundles, bales, and packages up to 16 in. high by 36 in. wide. For a copy, please mention PEE No. 179L in your request.

MAGAZINE MAILING

The Fast-Wrap Magazine Wrapping Machine, manufactured by Magnacraft Mfg. Co., is illustrated and described in a four page bulletin. The Fast-Wrap will flat, fold and band wrap and with optional equipment an addressing system is supplied. In the bulletin are specifications and a list of optional equipment. For a copy, please mention PEE No. 183L in your request.

Miscellaneous

BLANKETS AND STEREO MATS

This leaflet, 3½ in. by 8¼ in. is descriptive of newspaper and magazine press impression blankets, proof press blankets, stereotype molding blankets and stereotype mats. The Corkpak Co. gets a lot of descriptive matter about these products in small space. For a copy please mention PEE No. 170L in your request.

LINK-BELT CATALOG

Specifications and descriptions of chains and sprockets for conveying, elevating and power transmission equipment are among the contents of a 340 page catalog prepared by Link-Belt Co. Tables of pre-engineered drives facilitate the selection of standard roller chain drives and silent chain drives. Complete listings are provided of stock and made-to-order chains and sprockets. The catalog is thumb indexed for convenient reference purposes and is bound in an imitation

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MODELS

We specialize in ¼" scale layout models of all equipment used by planning engineers in the graphic arts industry, including models of personnel and building.

It is worth investigating today!

MODEL PLANNING CO.
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New Hyde Park
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Production and Mechanical Executives are invited to submit to the editor informally in a letter devices which have helped production in their plants.

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Modern Space-Saving Equipment

One of Our Many New Products

Combination Magazine Rack and Galley Cabinet

Write for Our New Catalog of "Space-Saving Equipment Priced to Save You Money"

Models for Both Linotype and Intertype Machines

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WHAT A BREAK... for '55

Don't be afraid of prosperity . . . it's here for a long time to come . . . take ADVANTAGE of it. Grab the "breaks".

Thanks to the thousands of orders you've given us, since V-E Day our costs of building, also merchandising costs were cut to the bone and we have, over the years, only taken a profit mark-up of 2% or less and the Many Purpose . . . Many-Profit "Goldmine" BAUMFOLDERS are priced so low.

Many thousands installed since V-E Day. *And now they cost even LESS, actually. Why? Because the new ACCELERATED DEPRECIATION LAW, now in effect, means that you can write off over 50% the first five years . . . the saving in taxes on your corporation's profit the first five years cuts your investment down 25%.*

The 17½ x 22½ five-fold "Junior Jet" automatic Folder, cutter . . . scorer . . . perforator, with Friction Feed . . . only $100 initial and $48 a month out of your increased profit for 30 months. The 22 x 28 and the 25 x 38 and the 30 x 46, likewise low-priced, on pay-for-itself terms over 30 months . . . just a small share monthly of your increased earnings.

OUT with the OLD . . . in with the NEW. All old model folders are POISON to *your profits* . . . SCRAP them and START making the MAXIMUM money NOW . . . THIS YEAR CAN BE YOUR MOST PROFITABLE YEAR . . . if you'll grab the "breaks". It's costing you heaven knows how much to be handicapped with obsolescent folders . . . why not telephone me (collect) LOmbard 3-8164 and talk it over.

Thank you again and again.

P. S. The MAXIMUM IN VERSATILITY. And all the speed paper can take . . . therefore you'll have the FASTEST (therefore, most profitable) folder years from now. The fault is not ours, if you refuse to install it . . . a world of increased profit to gain . . . nothing to lose.

Russell Ernest Baum

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CUT COSTS — PRINT WITH

RUBBER PLATES

MAKE THEM IN THE

EASY-TO-OPERATE

EVA-PRESS

Materials Cost Less Than $1.25 For 10"x10" Plate

1. Insert type form and plastic sheet into hot Eva-Press, apply pressure, let cure for 10 minutes.

2. Release pressure, extract all from Eva-Press and have finished matrix.

3. Place (1) sheet of rubber on (2) matrix and insert both into hot Eva-Press, apply pressure, let vulcanize for 10 minutes.

4. Release pressure, extract all from Eva-Press and have finished Rubber Plate. More detailed directions supplied with Eva-Press.

• PLATENS 11"x13"

• INSIDE CHASE 10"x12"

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DON'T GAMBLE WITH STATIC!

Use Herbert OXY COLD BARS!

Don't take chances on inadequate, inefficient or temporary static eliminators. They can be frustrating and costly.

Thousands of plants keep equipment operating dependably, production flowing smoothly and profitably . . . by using performance-proved Oxy Cold Bars.

Install this safe, sure static elimination on your own machines. You'll see why Oxy Cold Bar users are more than pleased with results.

Please send details of your machines for complete information.

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MODERN REMELTING
at it's Best!

The
NOLAN
REMELTER
and
MELTEVATOR

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8- or 16-Cavity
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Save Time
and Money

Write
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NOLAN Corp., Rome, N.Y.

Bigger Profits
from Larger Numbers

FORCE
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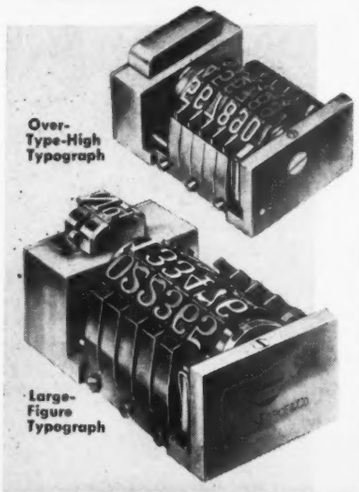

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Type-High
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Large-
Figure
Typograph

...on Tags

...Tickets

...Labels

These machines pay off handsomely on large-figure numbering — reduce trouble, increase speed and profit. Type-High Cases: 1/32" figures. Over-Type-High: 1/4" to 1 1/2" figures. Ask for catalog.

Write for Force Typograph Operating & Maintenance Manual.

WM. A. FORCE
& COMPANY, INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, N.Y.

The FORCE of NUMBERS

leather cover. Please mention PEE No. 171L when requesting a copy.

CHEMICAL DANGERS

The hazards of chemicals used in the Graphic Arts industry are discussed in a four page bulletin prepared by Anchor Chemical Co., Inc. Methods of preventing harmful effects are included. Some of the contents include toxic poisoning, skin ailments, sensitization dermatitis, how heat causes fire, etc. The bulletin measures 6 in. by 9 in. Please mention PEE No. 172L when requesting a copy.

PRE-PRESS PRICE LIST

This 16 page catalog contains specifications and prices for Vandercook & Sons, Inc. Pre-Press Equipment, consisting of proof presses, test presses, plate and type gauges, slug gauge, makeup gauge, block leveller, casting box, sawtrimmer, mounting press, mounting gauge, test blocks, and register punch. For a copy please mention PEE No. 173L in your request.

INDUSTRIAL VENTILATING SYSTEM

A two color, four page bulletin has been prepared by the Cambridge Filter Corp. presenting illustrative material and descriptions of the Cambridge Aerosolve Air Filter. The filter is equipped with a low pressure drop system of air filters designed for multi-filter banks in industrial ventilation or air conditioning supply systems. For a copy, please mention PEE No. 174L in your request.

PRINTING EQUIPMENT CATALOG

The 198 page catalog of Hamilton printing equipment for composing rooms, pressrooms and other departments of a printing plant is available from Hamilton Mfg. Co. A notched thumb index system provides convenient location of any item of equipment listed in the catalog. Included among the various equipment shown are type cabinets, working tops and cases, imposing tables, galleys and galley cabinets, trucks, work benches, storage cabinets, furniture and furniture cabinets, etc. Each item of equipment is described and illustrated along with specifications. The letterhead size catalog is printed in three colors and has a metal ring binding. Please mention PEE No. 176L when requesting a copy.

MATERIALS HANDLING CATALOG

A new catalog with 40 pages of pictures and information on a line of materials handling and overhead service machines has been produced by the Economy Engineering Co. For plant managers and maintenance superintendents who may use it for reference purposes. When requesting this catalog, please mention PEE No. 180L in your request.

Thomas Elliott Donnelley, honorary board chairman of R. R. Donnelley & Sons Co., died Sunday, Feb. 6 at his Lake Forest, Ill., home. Donnelley entered his father's printing business, R. R. Donnelley & Sons Co., after his graduation from Yale University in 1889, and became president in 1899. He held that position until 1934 when he became chairman of the board. He was also chairman of The Reuben H. Donnelley Corp. following the death of his brother, Reuben, from 1929 to 1951. Donnelley is survived by two sons, Gaylord, president of R. R. Donnelley & Sons Co., and Elliott, executive vice president, and a daughter, Clarissa.

Officers Hard at Work—The officers of the 1955 Intl. Craftsman's Convention Committee are, reading from left to right: Vice Chairman Wilbert Rosenthal, vice president, S. Rosenthal & Co.; Chairman Lee Augustine, vice president, The Printing Machinery Co.; Treasurer Robert E. Thiele, superintendent, U. S. Printing & Lithograph Co. The Craftsman's Convention will be held in Cincinnati, O., at the Netherland Plaza Hotel, August 7-10. The Committee expects to offer technical and educational discussions for Craftsmen as well as entertainment that will interest both Craftsmen and their wives.

"NEW ENGLAND" The Oldest Name in Press Blankets

NEW ENGLAND NEWSPAPER SUPPLY CO.

Consolidated with

NEW ENGLAND FIBRE BLANKET COMPANY

164 FREMONT STREET • WORCESTER, MASSACHUSETTS

GARDENER G. DeMALLIE, *General Manager*

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Have You the PENCIL-CHEWING WORRIES Over Mat Problems?

SWITCH TO

BEVERIDGE MATS!

If you are chewing your pencil over mat reproduction or shrinkage problems, switch to Beveridge mats. Beveridge's smooth face picks up the dots easily, gives clean release of the plate in casting and offers exceptionally deep moulding qualities. Rid yourself of mat worries—get sharp, faithful reproductions with minimum make-overs . . . that means use only BEVERIDGE Mats. Write today!

NEW PRODUCTS DIVISION

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PRESSROOM TIME SAVERS!

IMPROVED "CAPCO" PORTABLE INK FOUNTAIN . . . Provides color efficiently, in a matter of minutes. Tried, proved and guaranteed. Over **500 in use** in over **200 newspapers.** Weight—approx. 30 lbs.

"CAPCO" FACE-O-TYPE . . . A machine that mechanically reproduces an engraved type screen pattern! Cuts page costs and speeds production.

"CAPCO" PLATE GAUGE . . . New lightweight gauge is designed for checking the thickness of Standard stereotype plates, tubular and flat plates. Easier to use—greater savings.

"CAPCO" MULTI-CORE STRIPPER . . . A machine ENGINEERED to strip cores. Increases production as much as 400%. Many savings—will pay for itself out of savings.

Write Today for Complete Details

CAPITAL TOOL & MANUFACTURING CO.

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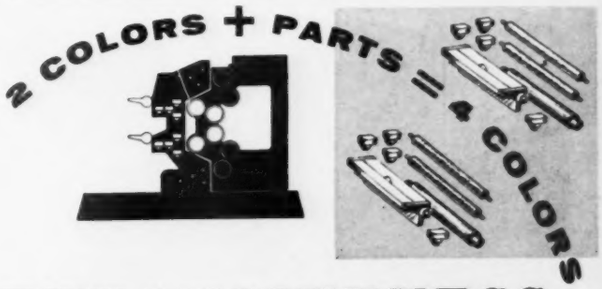
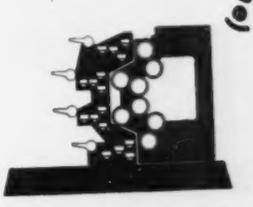
College Park, Maryland



EXPANSIVENESS

of Hess & Barker's Multi-Color Web Fed Letterpress is unique as it is the only press that provides a wide range of dimensions both in width and length. The press frame is machined ready to accommodate up to four colors. You can start with a two color press and with a small parts cost add up to four colors as your requirements increase. You will discover for yourself maintenance and production costs are surprisingly low. If this were not so, the managerial business judgment of 75% of our customers would be questioned as they now own and operate two or more Hess & Barker presses. Speeds 750 feet per minute or 10,000 sheets an hour. Write today for additional information.



MULTICOLOR WEB-FED LETTERPRESS

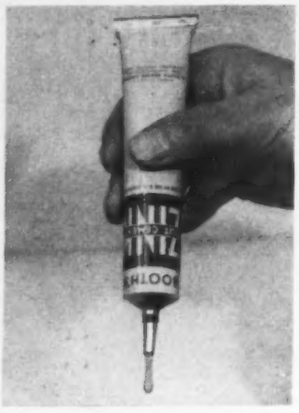
Manufactured by

HESS & BARKER

Printing Press and Equipment Manufacturers

212-22 SOUTH DARIEN ST., PHILA. 7, PA.

Telephone WA Inut 3-0248



GREATER ADHESIVE *POWER*
with
BOOTH ZINK CUT CEMENT!

SUPERIOR for mounting cuts and solidifying type elements for standing ads.

LOW PRICE of:
$1.00 per tube • $7.50 per dozen
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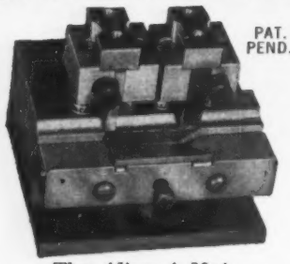
2855 Scarboro Road
Cleveland Heights 18, Ohio
Phone: FAirmount 1-2384

LINECASTING MATS NOW COST A QUARTER OF A DOLLAR EACH



The *Align-A-Mat*

This simple device will double and treble the life of your working fonts. Will restore to factory standard hundreds of mats ready to be discarded. Will eliminate distributor stops due to lugs worn short.

EVERY MAT SAVED IS 25¢ SAVED

Now in use in hundreds of leading plants here, in Canada and abroad.

Please write for literature.

FISK, 130 W. 46th St., N. Y. 36, N. Y.

Public Printer Given Honorary Membership

Public Printer Raymond Blattenberger was presented with honorary life membership cards in the Intl. Printing Pressmen and Assistants' Union of N. A., and the Philadelphia and Washington local unions. The presentation took place on February 19 at a testimonial dinner held at the Mayflower Hotel, Washington (D. C.) before a gathering of 200. The presentations and principal addresses were made by Thomas Dunwody, international president, and Raymond G. Fremeau, the Washington Union's president. International Vice Pres. Alexander J. Rohan acted as toastmaster.

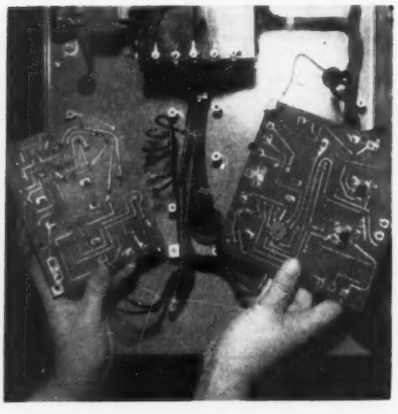
Equipment & Supplies

(Continued from Page 35)

counts per min. when actuated. Current draw is less than 5 w. and balanced armatures absorb shock or vibration. For further details, please mention PEE No. 421 in your request.

Electronic Adjustable Speed Drives

Printed circuitry and a simple control system are features of Thy-mo-trol electronic adjustable speed drives, manufac-



tured by General Electric Co. The replaceable print board panels can be visually inspected for circuit faults. The new design is available in two ratings, ¾ to 1 h.p., and 1½ to 3 h.p. full wave. The Thy-mo-trol controls are designed for stepless speed control from an a.c. power source over an 8 to 1 speed range, with higher speed ranges possible for special applications. Optional features available include pushbutton reversing, reactor loop control, jogging, and tachometer follower operation. For further details, please mention PEE No. 419 in your request.

Color Proofing Process

The Colomat process, developed by Unitronics, Incorporated, is designed for making color proofs from photographic posi-

SAVE WITHOUT WORRY
FIND IN A HURRY
OFFSET PLATES and NEGATIVES
USE
ATLAS VERTICAL FILING SYSTEMS

FILE-ALL MODEL
Constructed of heavy gauge steel. Equipped with casters.
Dimensions– 30" high, 24" wide and 28" deep.
Capacity 300 or more plates, negatives to 21" wide.

Write for catalog illustrating models and complete line of patented Atlas Hangers in 11½", 14" and 22" widths.

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PAPER SAVING
and
THE CHASE

● Increasingly greater accuracy in moulding newspaper pages is demanded of the Stereotype department when column or column rule width is changed so as to print on narrower or wider paper.

Your chases should be checked CAREFULLY.

Much time can be lost and a poor printing job produced if the Stereotyper has to work with mats that are made from faulty chases.

The chase is a piece of stereotype equipment and must have bolsters and/or lines to the proper specifications to work with the casting box.

AMERICAN STEEL CHASES give the maximum in strength and durability. They are manufactured carefully to meet every requirement of the composing room as well as the Stereotype department.

Contact us through your local dealer. Your chases may need only slight corrections for your page size change. A call on us may save you time and money! Only accurate chases can give you accurate mats!

AMERICAN STEEL CHASE CO.
31-31 48th Avenue • Long Island City, N. Y.

CARBIDE PRINTERS SAW

CUTS NEW ALLOYS INCLUDING DOWMETAL
CUTS STEREOTYPE, BASE, SLUGS, ETC.

A carbide saw that really works. Cleaner cuts, freedom from burrs, excellent back rake cutting, no scream, no chip throwing. Trimmer blades not being used with those now in service and apparently can be eliminated. Sharpening service available. Many large shops are now converting to this saw.

SENSIBLY PRICED. SPECIFY TYPE A (7″) or B (6″) $39.50

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Built only by . . . GAY-LEE COMPANY
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when a big fist pounds a desk

— a fist with authority and a desk padded with a paper that easy going subordinates thought was "all right." . . . Publishers are not satisfied when their own papers fail to compare in looks with the best exchange reaching his desk . . . Getting down to improvement measures, a change to Certified Mats finds a place in the list.

For dependable stereotyping, rely on Certified Mats

Certified DRY MATS

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Tie Newspapers . . . Magazines

The SAXMAYER Way!

All SR Models with or without packer use jute, sisal or cotton twine . . . makes tight secure tie with one wrap and non-slip bow knot . . . ties various size stacked or rolled bundles without adjustment . . . Model SR1C illustrated especially adapted to conveyor systems for full AUTOMATIC operation . . . Small motor and hand operated models for tying single papers for home delivery available . . . Machines fully guaranteed . . . over 30 models to choose from.

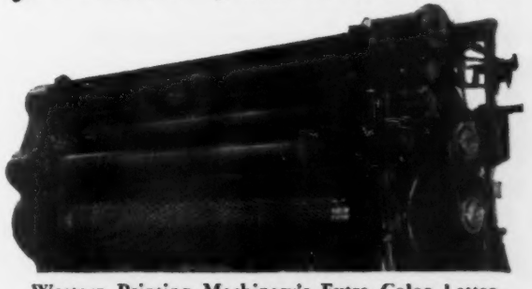
LITERATURE ON REQUEST

NATIONAL BUNDLE TYER CO.

BLISSFIELD, MICHIGAN

for low cost addition of third and fourth colors

for Miehle Flat Bed Presses



Western Printing Machinery's Extra Color Letterpress Unit for Miehle flat bed presses is the answer for low cost addition of third and fourth colors.

Precision built in several sizes, it will make a three or four color press of any standard 2-color Miehle flat bed. Production specifications are the same as the press to which it's permanently attached. Synchronization is perfect. Only minor changes are required for its installation.

This unit is low in cost and requires no additional floor space as it is mounted on top of the Miehle units. Operates efficiently and economically with the Miehle.

Write for further details.

WESTERN PRINTING MACHINERY CO.
3519 N. Spaulding Avenue
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WPM

ARMSTRONG
combination cork molders

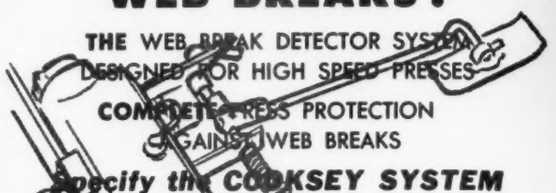
A ¼" ARMSTRONG cork molder and an .062 ARMSTRONG creeper making the total thickness 5/16"

20" x 24", 21" x 25" or 22" x 26"

Sold by

MIDWEST STEREOTYPE SUPPLY CO.
1651 Blue Island Avenue Chicago 8, Ill.

WEB BREAKS?



THE WEB BREAK DETECTOR SYSTEM DESIGNED FOR HIGH SPEED PRESSES
COMPLETE PRESS PROTECTION AGAINST WEB BREAKS
Specify the COOKSEY SYSTEM
for information write to:
THE COOKSEY ENGINEERING CO.
9353 Seymour Ave. Schiller Park, Illinois
Sales Agents { The Goss Printing Press Co., Chicago
R. Hoe & Co., New York
Wood Newspaper Machinery Co., New York

Mr. Typesetting Machine Owner:

YOU WANT...

- Accurate, true slugs from your machines, with no down-time for machine adjustments and stops.
- Replacement parts in a hurry whenever you do need them.

YOU NEED...

- MONTCO quality parts on your machines to let your operators concentrate on production, not adjustment.
- MONTCO one-day handling on all your orders.

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PARTS & SUPPLIES
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MONTCO PARTS ON YOUR MACHINE MEAN PROFITS IN YOUR POCKET

tives in 15 min. Colomat is exposed in a standard vacuum frame using the usual light source. It is dry developed by exposure to the fumes of aqua ammonia in a tight sealed box or bottle or a commercial diazotype machine. Colomat is a system of diazotype films which, when used in matched sets of three or four colors, reproduces full process colors. After exposure and dry development, the Colomat films are overlaid in proper print order. Sponsor claims it provides a close facsimile of the finished job. Seven colors such as black, warm red, green, brown and others are available for proofing color work. Color variations from tint to a dark intensity may be obtained by changing exposure time. For more details, please mention PEE No. 426 in your request.

Scan-A-Graver Linking Device

A system for linking two standard Scan-A-Gravers for simultaneous double plate production was announced recently by Fairchild Graphic Equipment, Inc., subsidiary of Fairchild Camera and Instrument Corp. This development permits operation of two Fairchild electronic engraving machines of the same screen in a number of combinations. By employing one unit to scan copy and transmit impulses to its own cutting head as well as that of the tandem unit, two identical Scan-A-Gravings can be produced at the same time when double plating of the press is required and direct printing quality desired. Either machine may be used as the master unit. Both Scan-A-Gravers may be operated independently as individual units. For further information, Please mention PEE No. 414 in your request.

Photographic Projection Paper

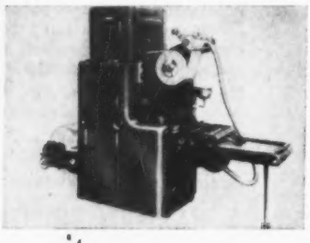
E. I. du Pont de Nemours & Co. announces Velour Black photographic projection paper for use with Intertype Fotosetter equipment. The rolls are in Velour Black R-4 paper (white, glossy, single-weight), and are available in 3¾ in., 5¾ in., and 7¾ in. widths. Each roll is 25 ft. long. For further details, please mention PEE No. 403 in your request.

Carbide Tipped Cutting Blade

DeLuxe Saw & Tool Co. recently announced a new line of blades trademarked

Karbide King Electro-Trim. Sponsor states the carbide-tipped blade can cut through linecomposing slugs, stereo flat casts, zincs, electrotypes and plastic plates. For further details, please mention PEE No. 422 in your request.

Speed Flex **ROTARY PRESSES SPEED PROFITS!**



for new, faster methods of printing, investigate
Speed Flex

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117 West 9th St., Los Angeles 15, Calif.

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WRITE FOR INFORMATION!
Designed and sold exclusively by Orville Dutro & Son. Made by Western Gear, manufacturers of gears and special machinery for industry since 1888.

WEB OFFSET PRESSES

DESIGNED & BUILT TO YOUR SPECIFICATIONS BY
GEORGE HANTSCHO

22¾" x 36" HIGH SPEED PUBLICATION PRESSES NOW IN PRODUCTION

Over 25 years' experience designing and building presses

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MOunt Vernon 7-8200

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ALL CLASSIFICATIONS

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We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer. 1276 West 3rd Street, Cleveland 13, Ohio.

STAR CUT CEMENT

Famous since 1936, hundreds of users testify to the effectiveness of STAR CUT CEMENT. Do a better job of mounting photoengravings, stereotypes and electrotypes by using STAR CUT CEMENT. Composing, stereotype, electrotype and photoengraving executives must see that the mounting job is done right. They know the value of a cement that permits mounting cuts quickly and holds them in place. Be sure to use the PROVED cement–STAR CUT CEMENT.

65c per tube—$5.50 per doz. $5.00 per doz. in 2 doz. lots. $4.50 per doz. in gross lots.

STAR CEMENT COMPANY
45 Malone Avenue
Belleville 9, N. J.

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New and Used Magazines and Mats. Proof Presses. Write for Catalog — Foster — 210 N. Broad St., Philadelphia 2, Pa.

FOR SALE

PLATES, new zinc, grained 22 x 29 Web., $1.35 each. Ungrained 89 cents each. VOGUE TAPE — 105 W. 72nd St., New York City.

FOR SALE

No. 41564R Model 14, 3 full 1 Aux., Teletypesetter keyboard.
No. 29504, Model 14, 1 DK, 3 full length Mag. 1 DK.
(Each of these machines with Margach Feeder, Electric Pot, 220 V. Single phase motor, and 4 UA Molds)
No. 7436-R Model 5 High Base, 1 UA Mold No. 24449, Model 14, 5½, 7 and 12 pt. type, 4 UA molds.
(Each of these machines with Margach Feeder, Electric Pot, 220 V. three phase motor).
Elrod No. F8-32G, Margach Feeder, Gas Pot and other Composing Room Equipment.

Mississippi Publishers Corporation
P. O. Box 40
Jackson, Mississippi

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FOLDER Operator for MM Cleveland. Permanent position in San Diego, Calif. Write Box 526, PRINTING EQUIPMENT *Engineer*.

What Have You Developed?

From time to time, mechanical and production executive readers have developed devices to speed production or improve machine operation. Many of these have appeared in *Printing Equipment Engineer*. If you have devised something of this kind, our readers will appreciate knowing about it. Just write informally to Editor, *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

THE DOYLE INFRARED DRYER
Patented
for all types of printing machinery
THE DOYLE VACUUM SHEET CLEANER
Patented
Removes dirt, dust, lint and dry spray from paper while printing
The J. E. Doyle Co., 1220 West 6th St., Cleveland 13, Ohio

WEB DRYING APPARATUS
for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS
B. OFFEN & CO.
168 N. Michigan Ave. Chicago 1, Illinois

For good used equipment check

ATF-WEB, 14 x 20", as is	$3,000
ATF-WEB, 17 x 22", as is	4,500
Harris LB, 41 x 54", as is	5,500
Harris 258 (LSK), 42 x 58" two-color, as is	35,000
Miehle "69", 46½ x 67½", as is	15,000

BOX No. 1, Printing Equipment Engineer

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Consulting Engineers Since 1893
ECONOMIC STUDIES, PROCESS STUDIES, DESIGN, SPECIFICATIONS
PROCUREMENT AND SUPERVISION OF CONSTRUCTION
FOR
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in the ALICO Evenray Mat Drier
Over 256 in use

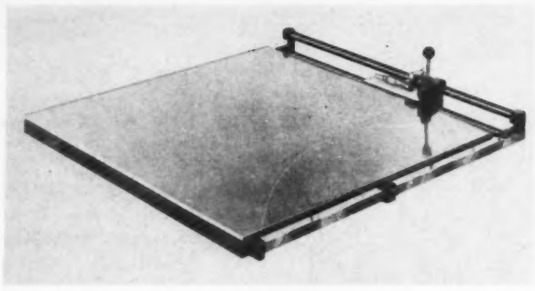
USERS REPORT:
- Type Sharper
- Halftones Clearer
- Greater depth of mould
- Plates wear longer
- Uniform drying
- Less drying time

...and now AUTOMATIC when equipped with DEVICE to feed and eject mats automatically

For prices and further information write
ALICO, Inc. WEST SPRINGFIELD, MASS.

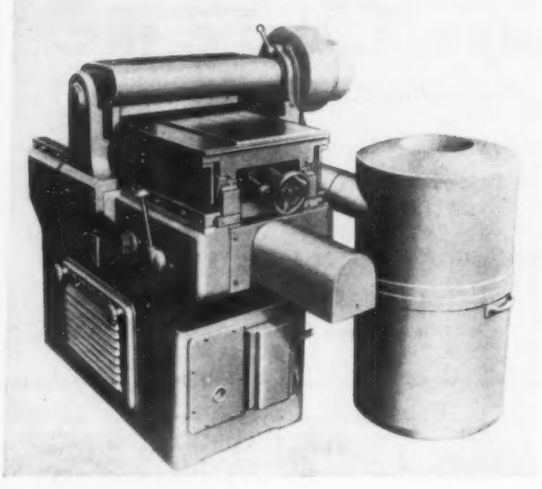
STAINLESS PRECISION TOOLS
Stainless Steel T-Squares, Triangles, Straightedges, and Precision Drawing Instruments and Scales. Circular and Linear Pantograph Engraving to order.
Catalog on request
THEO. ALTENEDER & SONS
Since 1850
1223 Spring Garden Street • Philadelphia 23, Pa.

Photocomposing Spacer —Hairline step and repeat work on offset plates and for photoengraving and offset negatives and positives with the Carlson Photocomposing Spacer is announced by Chesley F. Carlson Co. The Carlson Spacer, it is claimed, will save more than 75% of the time required in stepping by hand and will handle the finest quality work to close register. The Carlson Spacer can be used for steps from a min. of 1 in. to a max. of 26 in. The unit is suitable for darkroom exposure of multiple negatives with vacuum frame and overhead light. In stepping on film, all work prior to actual stepping is done in daylight.



Carlson reports: "Three basic elements are required in the step and repeat operation: (1) Vacuum for contact, (2) Light for exposure and (3) Exact control of distance stepped both vertically and horizontally. Every offset plate room has an efficient vacuum frame for contact and an arc lamp for exposure. The need is to provide high-precision equipment for control of stepping in the vacuum frame. This is what is accomplished by the Carlson Photocomposing Spacer."

Spacing to 0.001 in. is possible with the micrometer control. No more than two dimensions need ever be set on the Spacer regardless of the number of steps on the job. Stepping doubleprint images saves stripping and register of negatives. When saved with the negatives, the Master Control Strip permits re-stepping a plate at any time with exact register. Less than 9 sq. ft. of space required for the Spacer. For more details, please mention PEE No. 425 in your request.



Monomelt Shaver Improved — The Monomelt Co., Inc., announces that its heavy duty hydraulic shaver is now equipped with a built-in vacuum disposal unit and a heavy duty hold-down assembly. Other features of the machine include a variable speed hydraulic drive, fast return, micrometer controlled table, and a separately adjusted 19 finger spring tension hold-down. The shaver's table has a capacity of 17½ in. by 22½ in. For more details, please mention PEE No. 436 in your request.

Conveyor Spur is Movable —Trav-A-Spur, manufactured by Metzgar Conveyor Co., is a movable spur with diverting rail built as a single unit to travel the entire length of a Metzgar Live Roller Conveyor. Originally designed for high speed delivery of packaged newspapers to three truck-loading stations, application is also feasible in wholesale and warehousing operations and for feeding production work to assembly, inspection and packaging lines. The spur is ball bearing throughout. It travels on rails, one mounted on each side of a Metzgar Live Roller Conveyor. Its discharge end is mounted on caster wheels that run on the floor. It can be shifted from one station to another quickly. The skate-wheel type of spur is held rigidly in place by a lever-action cam clamp. Trav-A-Spur is available in height adjustments to match live roller conveyor to which it is attached in standard widths of 11½ in., 15 in., 18 in. and 24 in., with lengths to suit requirements. For further details please mention PEE No. 412 in your request.

ADVERTISERS' INDEX
MARCH 1955

P. E. E. REPRESENTATIVE

WILLIAM L. OSBORN, Eastern Advertising Representative, 1712 Grand Central Terminal, New York 17, N. Y. Phone MUrray 6-5980.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

GEORGE GELL, Central District Advertising Representative, 1276 West Third St., Cleveland 13, Ohio. Phone PRospect 1-0088.

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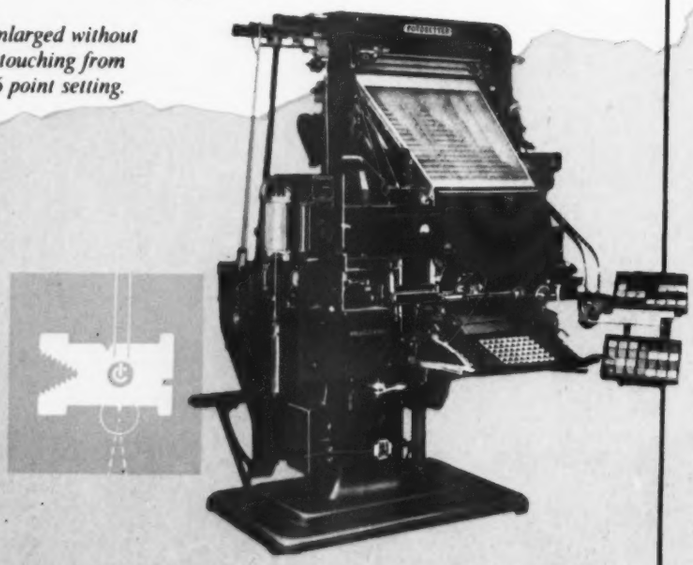

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